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VOLUME NO. 3

EXPLANATORY NOTES

FOR

DEPARTMENT OF AGRICULTURE

BUDGET ESTIMATES

FISCAL YEAR

1944



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WHITE PINE BLISTER RUST CONTROL

Appropriation Act, 1943	\$1,949,000
Budget estimate, 1944	<u>1,946,342</u>
Decrease (travel funds returned to surplus)	<u><u>-2,658</u></u>

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Planning, coordination and technical direction of blis- ter rust control through the United States (Bureau of Entomology and Plant Quar- antine)	\$388,752	\$450,150	450,150	--
2. Blister rust quarantine enforcement (Bureau of Ento- mology and Plant Quar- antine)	10,100	10,000	10,000	--
3. Blister rust control opera- tions on the national for- ests (Forest Service)	683,357	1,042,992	1,042,992	--
4. Blister rust control opera- tions on lands under juris- diction of Interior Depart- ment (Department of Interior)	109,750	174,910	174,910	--
5. Cooperative control of blister rust on state and private forests (Bureau of Entomology and Plant Quar- antine)	82,290	268,290	268,290	--
Covered into Treasury in ac- cordance with Public Law 674	--	2,658	--	-2,658
Unobligated balance	17,311	--	--	--
Total appropriation	1,291,560	1,949,000	1,946,342	-2,658

WORK UNDER THIS APPROPRIATION

Objective: To control white pine blister rust in the white pine forest areas of the United States by the timely eradication of the disease-spreading

alternate host plants (currants and gooseberries, commonly called Ribes) so as to preserve the present and future economic, aesthetic and recreational values of these forest trees.

The Problem and its Significance: The blister rust problem in the United States involves the suppression of Ribes on white pine control areas aggregating over 28,000,000 acres. These areas occur on the National Forests, National Parks, O&C Revested lands, Public Domain, Indian Reservations, and on state and privately owned lands. Federal, state and privately owned lands are often intermingled and under such conditions the control work must be coordinated and operated as uniform work programs. Initial Ribes eradication has been performed on over two-thirds of the control area, and about one-fourth of it has been reworked one or more times to maintain control of the disease. Over 1,100,000,000 Ribes have been destroyed in this work.

Completion of the initial control work will prevent serious losses of young growth from this disease. Also, re-eradication is important in keeping Ribes on the decline in worked areas. This is accomplished by proper timing of re-eradication to prevent Ribes from producing seed. As the initial work has been done over a period of several years, some of the worked areas are reaching the re-eradication stage each year and should be promptly reworked to maintain the most effective control of the rust. Reworking keeps the Ribes population on the downward grade and safeguards the investment already made. In many control areas one reworking is enough to reduce the number of Ribes so low that the areas can be placed on a maintenance basis. Others require two or more reworkings. Once these areas have reached a maintenance basis, a small amount of work is needed each year to maintain the control status and to eradicate Ribes from new sites that are being taken over by natural reproduction and by forest plantings.

There are 8 species of native white pine in this country, three of which are of great economic value. The three commercial species are the eastern white pine which extends from Maine southward to Georgia, and westward to Minnesota; the western white pine of the northern Rocky Mountain region, and the sugar pine of Oregon and California. The present mature stands of these trees have an estimated stumpage value of about \$300,000,000. The young growth probably represents equal or greater values in potential future crops. Also, the white pines in general are highly important over extensive areas for park and recreational purposes and for watershed use on public and private lands. The conservation of the country's white pine resources is an integral part of a program to keep these forests productive and provide timber supplies which are recognized as important military assets. The control of blister rust is necessary to protect and conserve the supply of this valuable wood for present and future National Welfare, to provide for the stability of white-pine-using industries and to maintain employment and community welfare in white-pine-producing areas.

The white pines constitute a renewable forest resource of great importance to present and future forestry in this country. These forests are in serious danger from white pine blister rust, a destructive fungous disease of foreign

origin that is now present in 27 states. The rust kills the white pines, the young trees dying quickly and the older trees more slowly. In unprotected areas the young growth and many of the older trees scattered through the forests are already succumbing to the disease. The fungus which causes blister rust spends part of its life cycle on currant and gooseberry plants. Spores produced on these plants infect white pines, and form bark cankers that kill the trees. Control is accomplished by the elimination of the currant and gooseberry bushes within and near white pines.

Blister rust control work is important on public and private lands where eastern white, western white, and sugar pines are significant and valuable components of the forests. Eastern white pine is commercially important over extensive areas from Minnesota to Maine and south to Georgia.

On good sites it is capable of producing from 20,000 to 30,000 board feet per acre in 60 years and is one of the principal sources of income for owners of farm woodlots and forest lands. In the Inland Empire (eastern Washington, northern Idaho, and western Montana), the continued production of western white pine is the backbone of local economy and essential to the maintenance of dependent industries and the production of valuable timber products for nationwide markets. Likewise, sugar pine is of high economic importance within its natural range in California and Oregon. These regions are sources of commercial timber supplies that must be protected from blister rust to safeguard present and future white pine forests and the industries for which they furnish the raw material.

General Plan: The white pine blister rust control work is conducted under the leadership of the Bureau of Entomology and Plant Quarantine in cooperation with other Federal, state, private, and local agencies. The Bureau carries the responsibility for the over-all planning, coordination, and technical direction of the work. It also determines the location and intensity of blister rust infection, develops and improves control methods, maintains effective standards of Ribes eradication, enforces the Federal blister rust quarantine, and carries out surveys to locate and map white pine. Ribes eradication on state and private lands is performed by the Bureau in cooperation with the agencies and individuals concerned. Authority for the removal of Ribes is provided under the plant pest laws and regulations of the cooperating states, which also are responsible for regulating the movement of Ribes and pines within the state.

The Forest Service is responsible for Ribes eradication carried out on lands under its jurisdiction, and the Department of the Interior for similar operations on lands under its administration, including the National Parks, Indian Reservations, and the Oregon and California revested lands.

White pine forest stands are selected for blister rust protection on the basis of minimum stocking requirements agreed upon by the cooperating agencies. These vary somewhat in accordance with forest practice in the different white pine regions. Such stands and their surrounding 900-foot protective zone are called control areas. The establishment of control areas for

the protection of ornamental, recreational, or esthetic white pine stands depends upon their value, importance, and use for such purposes.

The control areas are eradicated of Ribes by laborers operating under close supervision. They are then checked by trained employees to make sure the Ribes have been reduced to a point that effectively establishes control of the disease. These control areas are re-examined at periodic intervals of about 4 to 6 years to locate areas reinfested by Ribes that may have developed from sprouts or from seeds in the soil, or from small missed bushes. Such areas are reworked to maintain continuous control of the rust. In the West, white pine forests are remote from centers of population, and the workmen have to be subsisted in camps within the control areas.

Progress and Current Program: Practical and effective control of the blister rust disease of white pines is obtained by the eradication of currant and gooseberry plants, commonly called Ribes, that are growing within infecting distances of trees to be protected.

During the calendar year 1941, the several cooperating Federal, state and private agencies destroyed 34,549,587 Ribes on 1,616,393 acres of control area. The total acreage covered consisted of 868,315 acres of initial eradication, and 748,078 acres of re-eradication. The details of this work are summarized in the attached tables Nos. 1 to 5, by regions, programs and land ownership, with separate tables for the work on National Forests and National Parks.

Since 1933, the Ribes eradication work has been greatly augmented with emergency relief labor. In recent years the amount of this labor has gradually dwindled, and the number of these individuals used on Ribes eradication in 1941 was only about half the number assigned the previous year. The chief source of this labor was closed on December 31, 1941, when all Federal Agency WPA projects were discontinued. Later in the fiscal year, the Civilian Conservation Corps was terminated, thus eliminating the labor previously obtained from this agency. A relatively small number of WPA laborers were assigned to control work on Bureau-sponsored state SPA projects, and these are now being liquidated. This decrease in emergency relief labor has reduced the amount of Ribes eradication, and its effect on the work program has resulted in more attention being given to re-eradication in order to maintain rust control on areas already under protection.

In northern Minnesota and in the western white and sugar pine regions, the forested areas are so remote from sources of labor that it is necessary to subsist the employees in camps. During the 1941 season, 67 camps were operated of which 14 were manned with relief labor and 53 with seasonal employees of the Department and cooperating agencies. In addition, varying amounts of labor were assigned from 89 CCC camps in the white pine regions of the country. These camps were operated by the Forest Service, Soil Conservation Service, National Park Service, Office of Indian Affairs, and cooperating States.

Planning, Coordination and Technical Direction: The Bureau of Entomology and Plant Quarantine provides the leadership and over-all planning, coordination and technical direction of the Ribes eradication work performed by cooperating Federal, state, and local agencies. In addition, it cooperates directly with state, local, and private agencies on a 50-50 basis in the application of control measures on state and privately owned lands. Where such lands are intermingled with and endanger public holdings, the Bureau carried on the necessary control work without requiring matching funds from state and private land-managing agencies. The Bureau also carries out necessary general control activities of a supplemental nature and obtains the information on rust spread and other phases of the work needed for planning and technical direction of the control program.

The other federal agencies concerned with this work are the Forest Service of the Department of Agriculture and the National Park Service, General Land Office, and Office of Indian Affairs of the Interior Department. The participating state and local agencies are represented by 26 states and by counties, townships, timber protective associations, lumber companies and individuals.

Protection of White Pine Nurseries: Ribes eradication around 59 nurseries was carried on to protect over 79,000,000 young pines growing in the nursery and transplant beds. In this work 23,628 acres of protective zones were eradicated of 90,296 Ribes, or an average of 3.8 bushes per acre. This was largely rework to keep Ribes out of the protective zones around these nurseries. Many of them are now practically Ribes-free and are maintained in this condition by periodic inspection and reworking any portion bearing Ribes.

Eradication of Ribes nigrum: The eradication of the highly susceptible European cultivated black currant, Ribes nigrum, in white pine regions was continued and resulted in the removal of 2,364 of these plants from 421 locations. All of these bushes were found in the Lake States region.

Treatment of Infected Pines: There are many white pines of high forest or ornamental value within the infected regions that have been attacked by blister rust. If not too badly diseased, these trees can be saved by cutting out the blister rust cankers. This treatment was given to 1,350,594 infected pines. In addition, 44,067 fatally diseased trees were destroyed. This work is also helpful in retarding the local intensification of the disease.

Locating and Mapping White Pine: White pine stands and their protective borders, aggregating 1,464,666 acres, were located and mapped for Ribes eradication. Most of this work was carried on in the Eastern white pine regions.

Spread of the Rust: The last report to the Agricultural Appropriation Committee on the spread of blister rust covered the year 1940. In 1941, climatic and other conditions affecting the rust were favorable for the

spread of this disease. The spread was featured by the extension of the disease on Ribes from central Virginia and West Virginia into northern Tennessee and North Carolina, and by the finding for the first time of large numbers of cankers on sugar pine in northern California and southern Oregon in localities where Ribes were found infected in previous years.

The southward spread of the rust on wild Ribes in the Appalachian region extended for a distance of about 134 miles. This spread is not especially serious from a control standpoint, since most of the valuable white pine stands within the newly infected counties already have been protected from serious damage by the initial eradication of Ribes. In the sugar pine region the rust has spread southward in the Coast Range for some 200 miles and in the Sierra Nevada for 170 miles. The known limit of pine infection in the latter region was extended about 60 miles farther south. The infection on Ribes in Plumas and Sierra counties was found close to the boundary of Yuba county. The discovery of infected sugar pine near Cascade in the southern end of the Plumas National Forest in Plumas county was most significant. Although one infected Ribes roezli was found in this area in 1938, no new cankers were found on the pine. In 1941, 28 infected pines containing 74 cankers were located. The discovery of blister rust on sugar pine so far south in the Sierra Nevadas, and the large increase in the number of infected pines, is tangible evidence that the disease is beginning to establish itself over a wide area in northern California. In this part of the state, a total of 929 cankers was found on 351 pines. Prior to this, only 4 pines with 4 cankers had been discovered in the Sierra and Cascade Ranges in California. All pine cankers and all infected Ribes located during 1941 in the Sierra Nevada and Cascade Ranges were destroyed to retard the spread of the rust as much as possible. The disease was found for the first time on pines and Ribes in Crater Lake National Park and on white pines in Glacier National Park. In other regions the rust continued to spread to new unprotected locations within the known infected area.

In 1942, the spread of the disease on pines and Ribes remained within or immediately adjacent to the previously known infected regions.

Methods Development: Further improvements were made in Ribes eradication methods and studies in Ribes ecology in the western white and sugar pine regions. The special D-2 tractor, equipped with front-end brush rake and a rear-end Ribes hook, was used effectively in heavy patches of Ribes on the Sierra and Plumas National forests in California; this resulted in an estimated saving of about 65 percent of the man-days needed to do the same work by hand methods. The operation of the hooks from the rear end of the tractor was improved by installing in a vertical position on the drum a pair of 12-inch steel rollers. This made it easier to roll out the cable by hand and reduced friction and wear on the cable when the hooks were being pulled at an angle to the revolving drum. A specially designed Ribes peavy tested in California was found to be effective and useful for uprooting large, deeply-rooted Ribes.

An important new development has been the testing of a Ribes regeneration

key for predicting the extent of future regeneration of *Ribes* on control areas, and for aiding in the establishment of correct eradication plans for the immediate suppression of *Ribes* in the western white and sugar pine regions. Preliminary tests of the key were encouraging, and further work should improve its usefulness and accuracy. Further progress has been made in field studies designed to show the effect of grazing on the establishment of sugar pine, western white pine and *Ribes*; the differences in light, moisture and temperature requirements for western white pine, and for *Ribes viscosissimum* and *R. lacustre*; and the effects of logging and burning on *Ribes* regeneration with special reference to present methods employed in the management of white pine areas.

Quarantine Enforcement: The examination of nursery stock enroute at key transfer points in the United States was continued as the primary means of securing compliance with the Federal domestic quarantine due to white pine blister rust. The effectiveness of this procedure is indicated by the marked reduction in number of violations. During 1920, the first year of transit inspection, 12 out of each 1,000 shipments inspected were found to be moving in apparent violation of quarantine regulations, while in the fiscal year 1942 only 93 shipments were intercepted--considerably less than 1 out of each 1,000 shipments inspected.

Blister Rust Control Operations on National Forests (Forest Service): The white pine blister rust control work in the National Forests of the North Central and Eastern States has been materially reduced by curtailing CCC and other emergency programs. In these forests, the important job is to maintain the areas already covered, and extend the project to cover white pine areas comprising 183,155 acres which have not been initially protected.

The control area on National forests in the West aggregate 2,432,000 acres of which 1,323,000 acres are western white pine and 1,109,000 sugar pine. Initial *Ribes* eradication has been completed on 1,382,000 acres as of January 1, 1942, of which 1,034,000 acres are western white pine and 348,000 are sugar pine. There remain 1,050,000 acres unworked in the western white and sugar pine stands in the National forests. The control work has been under way for a longer period in the western white pine region, and consequently is much further along than in the sugar pine region.

Blister Rust Control Operations on Lands under Jurisdiction of the Interior Department: A careful study has been made of the National Park areas bearing white pines in order to hold the control areas to the minimum considered adequate to preserve important white pine values. According to these studies, there are 456,707 acres of land in 13 National Parks and the Blue Ridge Parkway on which five-needled pines form an important part of the forest cover.

In the National Park system, blister rust control has been under way since 1930, and has resulted in the initial eradication of *Ribes* on 240,349 acres as of January 1, 1942, leaving unworked 216,358 acres on that date. The disease is becoming more widespread and cumulatively increasing damage may be

expected on unprotected areas. If these pines are to be protected the Ribes must be eradicated, otherwise the pines will be killed.

There are now approximately 129,541 acres in tentative control units under the jurisdiction of the Oregon and California Revested Lands Administration of the General Land Office upon which five-needled pines occur. The total volume of soft pine timber on the area approximates 1,100,000 board feet, of which about four-fifths is sugar pine and the remainder western white pine. These species are among the most valuable permanent components of these forests. They are highly valued and very desirable for forestry purposes and their loss would greatly reduce the productive value of these lands.

An intensive pine reconnaissance survey is being conducted on areas supporting sugar pine or white pine. Its purpose is to obtain accurate information regarding pine stocking, timber site, and Ribes occurrence. From such data the practicability of instituting control may be determined, which may increase or decrease the acreage in blister rust control units. At the end of the year 1941, initial Ribes eradication was completed on 30,083 acres, leaving 99,458 acres based on original estimated control units to be worked. As the disease is rapidly gaining a foothold in the non-controlled sugar pine areas, it is imperative that control be completed as quickly as possible in order to prevent a heavy loss from blister rust.

On Indian Reservations there are approximately 109,345 acres of land on which five-needled pines occur that are valuable for their saw timber. Initial eradication has been done on 78,064 acres, and 38,687 acres of rework has been performed. There remain 31,281 acres to be treated initially.

Blister Rust Control Operations on State and Private Forests: Over 23,000,000 acres of the control area are in state and private ownership. As of January 1, 1942, over 18,000,000 acres of this area had been initially protected by eradicating more than 600,000,000 Ribes. Blister rust control on these lands was advanced during the year 1941 by the eradication of 19,342,827 Ribes on 1,306,171 acres, of which 669,075 acres was initial work and 637,096 rework. Removing these Ribes was of primary importance in protecting pines on state and private lands, but where these lands were intermingled with federal lands, the work also afforded protection to the pines on Federal ownership.

White Pine Blister Rust Control - 8

Table 1. Ribes Eradication Work During the Calendar Year 1941

(Initial and Re-eradication)

Regions	Initial Eradication	Re-eradi- cation	Total Initial Eradication and Re-eradication ¹	Effective Labor	Ribes Destroyed
	Acres	Acres	Acres	Man-Days	Number
Northeastern States	208,247	367,325	575,572	78,609	5,732,116
Southern Appalachian States	479,017	136,855	615,872	24,923	2,090,146
North Central States	132,442	157,314	289,756	54,686	10,899,469
Western White Pine States (Idaho, Montana, Washington)	20,225	50,992	71,217	78,265	8,769,780
Sugar pine States (California and Oregon)	28,384	35,592	63,976	39,604	7,058,076
Rocky Mt. States (Colorado and Wyoming)	—	—	—	—	—
Total	868,315	748,078	1,616,393	276,087	34,549,587

¹Includes work of cooperating Federal, state, and local agencies.

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Table 2. Summary of Acreage Worked in 1941 by Programs (Initial and Re-eradication)

Regions	: Regular and : : Cooperative : : Programs :	: W.P.A. : : Programs :	: C.C.C. : : Programs :	: Total : : All : : Programs :	: Total : : Emergency : : Programs :
Northeastern States	220,534	299,091	55,947	575,572	355,038
South. Appalachian States	13,334	594,083	7,735	615,872	602,538
North Central States	29,584	241,808	18,364	289,756	260,172
Western White Pine States ...	60,860	7,290	3,067	71,217	10,357
Sugar Pine States	50,388	8,032	5,556	63,976	13,588
Total	374,700	1,150,304	90,669	1,616,393	1,241,693

Table 3. Summary of Acreage Worked in 1941 by Land Ownership (Initial and Re-eradication)

Ownership	: Eastern : : White Pine : : Region :	: Western : : White Pine : : Region :	: Sugar : : Pine : : Region :	: Total : : : : : :
Federal	:	:	:	:
National Forests	130,522	47,493	28,863	206,878
O&C Revested Lands	- -	- -	3,134	3,134
Other Public Domain	150	333	- -	483
National Parks	83,635	1,479	8,114	93,227
Indian Reservations	6,500	- -	- -	6,500
Total Federal	220,807	49,305	40,110	310,222
State and Private	1,260,393	21,912	23,866	1,306,171
Grand Total	1,481,200	71,217	63,976	1,616,393

White Pine Blister Rust Control - 10

Table 4. Progress on National Forest Lands in 1941

Region	Ribes Eradication - Acres						
	Control Area Acres	First Working	Second Working	Additional Working	Total	Total Initial	Unworked Acres
Northeastern	14,473	-	-	-	-	12,887	1,586
Lake States	394,113	13,491	14,344	-	27,835	256,275	137,838
Southern Appalachian	1,231,010	68,991	24,648	9,048	102,687	1,187,279	43,731
Subtotal*							
Eastern Regions	1,639,596	82,482	38,992	9,048	130,522	1,456,441	183,155
Sugar Pine	1,109,399	9,388	8,890	10,585	28,863	347,990	761,409
Western White Pine	1,322,765	17,382	26,324	3,787	47,493	1,034,148	288,617
Subtotal							
Western Regions	2,432,164	26,770	35,214	14,372	76,356	1,382,138	1,050,026
Total	4,071,760	109,252	74,206	23,420	206,878	2,838,579	1,233,181

* National Forest work in Eastern Regions handled almost entirely by Emergency funds, much of it directed by Bureau of Entomology and Plant Quarantine.

White Pine Blister Rust Control - 11

Table 5. Progress on National Parks, Department of Interior Lands in 1941

Region	Ribes Eradication - Acres						Unworked Acres
	Control Area	1st Working	2nd Working	Total	Total Initial	Work to Date	
Northeastern	20,715	-	-	-	20,668		48
Southern Appalachian	144,735	77,269	6,115	83,384	144,662		73
Subtotal							
Eastern Regions	165,451	77,269	6,115	83,384	165,330		121
Sugar Pine	247,302	8,113	-	8,113	64,132		183,170
Western White Pine	43,954	60	1,419	1,479	10,947		33,007
Subtotal							
Western Regions	291,256	8,173	1,419	9,592	75,079		216,177
Total	456,707	85,442	7,534	92,976	240,409		216,298

PASSENGER-CARRYING VEHICLES

It is not contemplated that any new passenger-carrying vehicles will be purchased from this appropriation in 1944. It is expected that 71 old automobiles will remain in use.

GENERAL STATEMENT

The Forest Service has effectuated the transition made necessary by the demand for wartime services, in three different ways:

1. By a reorientation of programs within the framework of existing work projects. A discussion of these changes in emphasis will be found under the descriptions of work performed under a majority of the work projects.
2. By contributions of time and effort to war programs of other agencies and to meet requests from war agencies for special services. Examples of such cooperation undertaken by the Forest Service without reimbursement, or with only partial reimbursement, are given below:
 - a. Fire protection of military camps, bases, and maneuver areas. Cooperation involves survey of areas to determine hazards, and organization and training of military personnel for fire duty. Hundreds of soldiers so trained.
 - b. Forest 'Fire Fighters' Service. Performed at request of Office of Civilian Defense. Involves organization of civilian fire fighters. States organized.
 - c. Use of national forest lands for military purposes. Involves examination of many areas with military authorities, final selection of area to be used, issuance of special use permits, etc.
 - d. Salvage campaigns. Active participation of all field units in collection of iron and rubber.
 - e. Airplane accidents. Participation in searching out location of airplane crashes, removal of passengers, etc.
 - f. Agricultural War Boards. Participation by Forest Service personnel in state and county war board meetings and decisions.
 - g. Radio equipment. Demonstration of Forest Service radio equipment to, and numerous consultations with, military authorities. Army Winter Maneuver Battalion using FS type radio exclusively.
 - h. Equipment. Development of special types of equipment for military use. Forest Service designed "sno-motors" and trail tractors now in use by military organizations.
 - i. Parachute Work. Recently, technical advice has been given the Civil Aeronautics Authority in developing methods of parachuting

heavy machinery for the construction of advance air bases. Complete data supplied Marine Corps on parachuting men and supplies. Two or three years ago, technical assistance was provided the Army in formation of the first parachute battalion.

- j. Organization of Army Combat Forestry Engineer Regiment. Assistance given in selection of personnel from Government and private sources and location of suitable training areas.
 - k. Cooperation with winter warfare patrol. Assistance given Army in selection of type of equipment and operating procedure for winter warfare.
 - l. Production goals. Participation in the formulation, at national and state levels, of progress of war production and marketing goals for food, livestock, wool, shearlings, hides, and related products.
 - m. Increased livestock production. Preparation and dissemination, in cooperation with other appropriate departmental agencies, of practical guides to suitable stocking and best seasons and methods of grazing for increased and sustained production and for reseeding deteriorated ranges. Consultation, advice, and guidance to stockmen, their organizations, and administrators of publicly owned lands, on how to attain sustained increase in range production through improved management and reseeding.
 - n. The Forest Products Laboratory and the Forest and Range Experiment Stations have contributed substantial amounts of time and effort to the programs of other agencies. Detailed discussions of some of these projects will be found in the general statement under the Forest Research heading.
3. By undertaking specific projects financed by special appropriations or allocations from other agencies. Contributions in this field take the form of the assignments to the war project of experienced personnel who are replaced in the regular organization by less experienced employees; by contributions of time and effort of employees assigned to the work of, and paid from regular appropriations of the Forest Service, to war projects on an intermittent basis, or by absorbing additional work loads; by providing overall supervision and service facilities to such projects without requiring the war projects to finance the cost of such services.

A brief list of the major projects in this category is given below:

- a. Emergency Rubber Project. In the Department of Agriculture the Forest Service heads up the program dealing with the production of rubber from guayule, golden rod, cryptostegia, and other rubber-bearing plants. Estimated obligations for the fiscal year 1943 are \$27,000,000, and in 1944, \$56,000,000.

- b. Aircraft Warning Service. Includes use of state and Federal lookout towers. Over 500 towers manned on 24-hour basis. Estimated obligations for fiscal year 1943 are \$3,500,000.
- c. Alaska Spruce Project. Forest Service is responsible for getting out 100,000,000 board feet selected aircraft material and delivering to Seattle. Financed by Commodity Credit Corporation. Estimated deliveries of logs for fiscal year 1943 are 40,000,000 board feet.
- d. Access Roads. Forest Service constructs road projects in and adjacent to the National Forests. Projects are approved by WPB. Funds are provided by Public Roads Administration. Estimated obligations for fiscal year 1943 are \$1,500,000.
- e. Military Mapping Project. 5,000 square miles now being mapped by the Forest Service. 19 aerial approach charts also being prepared. Estimated obligations for fiscal year 1943 are \$439,000.
- f. Container Work for Army Ordnance. The Forest Products Laboratory has taken over the entire job of dealing with the container problems of the Ordnance Department of the Army. Estimated obligations for fiscal year 1943 are \$400,000.
- g. Survey of Important Central and South American Species. Coordinator of Inter-American affairs has advanced \$50,000 for a survey designed to locate critical species in this territory. Estimated obligations for fiscal year 1943 are \$50,000.
- h. Educational Courses. Army and Navy have advanced funds for conducting educational courses at the Forest Products Laboratory for inspectors of aircraft material and containers. Estimated obligations are \$53,000.
- i. Research and Development Work Relating to the Use of Wood, Plywood, Plastics, and Glues in Aircraft. Both the Army and Navy have advanced funds to accelerate the research work in this field. Estimated obligations are \$467,000.
- j. Products, Supplies, and Requirements. OEM has advanced funds for surveys of supplies and requirements of various species. Estimated obligations are \$275,000. Also mentioned in Research statement.
- k. General Working Funds. In addition to the specific items listed above, the Forest Service has numerous smaller working funds advanced by war agencies including such items as a \$5,000 advance from BEW for a survey of cinchona (quinine) stands in Central America, a \$5,760 advance from OEM for providing fiscal and procurement services in Alaska, etc.

(a) GENERAL ADMINISTRATIVE EXPENSES

Appropriation Act 1943	\$573,000
Proposed transfers in 1944 estimates to	
"Salaries and expenses, Library"	<u>-3,856</u>
Total available, 1943	569,144
Budget estimate, 1944	<u>563,670</u>
Decrease (including decrease of \$1,744	
travel funds returned to surplus)	<u>-5,474</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. General administration and				
business service	\$584,894	\$567,400	\$563,670	-\$3,730
Covered into Treasury in ac-				
cordance with Public Law 674	- -	1,744	- -	-1,744
Unobligated balance	3,700	- -	- -	- -
Total estimate 1944 and com-				
parable amounts 1943 and 1942:	588,594	569,144	563,670	-5,474

DECREASES

The decrease of \$5,474 in this item for 1944 consists of \$1,744 decrease in travel funds (returned to surplus in 1943) and:

- (1) A decrease of \$3,730 which will be met by reducing expenditures for supplies, materials, and equipment.

WORK UNDER THIS APPROPRIATION

In normal times the work under this appropriation provides for the leadership, coordination, planning, and control of the Forest Service organization which has to meet the responsibilities of the Bureau as shown below, and for the formulation of broad basic policies and methods for the guidance of the personnel of the Service in creating and maintaining a forest economy which will advance human welfare and which will, in times like the present, provide the Nation with adequate supplies of wood and wood products. It provides also for the service and facilitating agencies which are necessary in the central office relating to personnel management, information and education, drafting, business management, procurement, and finance and fiscal control, as well as for the necessary inspection and audit of field operations.

At this time the organization financed from this appropriation must necessarily assume the added burden of directing the Bureau's participation in the war effort.

The organization of the general administrative divisions consists of the Chief's office proper, Personnel Management, Fiscal Control, Information and Education, Operation, and the sections of Forest Land Planning, Drafting, and Photography.

The Forest Service has three major responsibilities in normal times, which must be supplemented during a war by a fourth. They are:

- a. The protection, management, development and utilization of 178,404,000 acres of land within the national forests, equivalent to approximately 10 percent of the area of the continental United States.
- b. The promotion of good forest practices, including the protection of forests, on the 428,000,000 acres of state and private lands.
- c. Forest and range research for all forest and open range lands.
- d. Development and operational activities in forestry and allied fields in furtherance of the war effort.

The primary function of the Forest Service is to effectuate the responsibility of the Federal Government in working out solutions of the Nation's forestry problems.

On the national forests this means direct technical management for the production of timber, forage for range livestock, water, wildlife, and recreation. It means the protection of public and intermingled private lands from fire and tree diseases, as well as the integration of the management of all forests resources, in order that they will contribute as fully as possible to economic and social betterment. It means, in short, the administration of the national forests in the broadest public interest and the demonstration of proper forest and related land management.

On the privately owned forest lands, which in major part are being badly handled from a national point of view, it means leadership, planning, and coordination of technical information. It means cooperation with the states and private agencies in protection against fire, in forest planting, and in obtaining improved forest management practices.

The attainment of these objectives requires the conduct of a large amount of research in all phases of forestry and forest range management, both independently and in cooperation with other technical and industrial agencies. Research in the technique of protecting, improving, and utilizing the forest resources and in the profitable use of land for forestry is essential to the success of the activities on the national forests and private forest lands. This research deals with problems of broad regional or national scope rather than those of a purely local character and is conducted under the provisions of the McSweeney-McNary and Clarke-McNary Acts.

Operating in three broad fields of activity, through its many field and coöperators' offices, the Forest Service is confronted with a complex and unusually difficult general administrative problem. There are approximately 1,000 field offices of the Forest Service, the majority of which are "one-man offices," where the opportunities for personal contacts with other employees are infrequent. Under these conditions there must be a constant flow of information and instructions from the central office to the field on policy and other matters.

The work of the Forest Service is closely allied with that of many other Government agencies, notably Soil Conservation Service, Bureau of Entomology and Plant Quarantine, the Division of Grazing, Bureau of Plant Industry, Public Roads Administration, Fish and Wildlife Service, Bureau of Agricultural Economics, Agricultural Experiment Stations, National Resources Planning Board, etc. During the war period numerous agencies have been added to this list, notably the Army, Navy, Coast Guard, WPB, OPA, BEW, War Relocation Authority, ODT, etc.

Because of its numerous fields of responsibility and resulting activity throughout the forested sections of all the states and territories, the Forest Service organization is of necessity and, as a result of thorough study, test, and deliberate choice, very thoroughly decentralized. The Division of Fire Control, for example, with responsibility for leadership and control (1) over a field force of from 5,000 to at times more than 20,000 persons engaged primarily in fire control work, and (2) over expenditures up to 10 million dollars a year, is composed in the Washington office of only 4 persons above the clerical grade. The other functional divisions in the main office are similarly restricted in size.

(b) NATIONAL FOREST PROTECTION AND MANAGEMENT

Appropriation Act, 1943	\$12,766,446
Proposed transfers in 1944 estimates to:	
"Salaries and expenses, Office of Solicitor"	-17,643
"Salaries and expenses, Bureau of Agricultural Economics, economic investigation"	-14,411
"Salaries and expenses, Library"	-17,581
"Salaries and expenses, Office of Secretary of Agriculture"	-6,120
Total available, 1943	12,710,691
Budget estimate, 1944	12,826,826
Increase (including decrease of \$48,865 travel funds returned to surplus)	<u>*116,135</u>

PROJECT STATEMENT

Project	1942	1943	1944	Increase or decrease
		(estimated)	(estimated)	
1. General management, operation, and regulations of national forest properties, including enforcement of Federal laws and regulations applicable to the national forests	\$4,880,720	\$4,946,321	\$4,946,321	- -

PROJECT STATEMENT - Contd.

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
2. Maintenance of improvements other than roads and trails (includes telephone lines, fences, lookout towers and observatories, fire breaks, offices, barns, garages, dwellings, outhouses, water developments, pipe lines, public camp grounds, landing fields, etc.)	\$ 444,949	\$724,704	\$724,704	- -
3. Forest fire control, including prevention of fires and maintenance of a detection and "smoke-chaser" organization	2,252,371	3,765,788	3,765,788	- -
4. Control of tree-destroying insects and rodents on national forests	94,849	95,674	95,674	- -
5. Timber and forest products sales, free and administrative timber use, timber surveys, management plans, and timber stand improvement	1,404,157	1,420,096	1,585,096	\$165,000 (1)
6. Allocation and issuance of grazing permits, supervision of range use by domestic livestock, range surveys and range management plans on national forests	493,551	499,872	499,872	- -
7. Protection and utilization of the wildlife resource, preservation of forest conditions conducive to the propagation of wildlife, reduction in number of game animals in overstocked areas, wildlife surveys, and management plans	186,568	94,324	94,324	- -
8. Enforcement of sanitary laws, garbage disposal, policing and other requisite measures for safeguarding health and safety of national forest users	292,201	210,731	210,731	- -
9. Land-use management on national forests, including rental of land; land classification; action on claims entered under public land laws; location and posting of national forest boundaries; general surveys, plans and maps, aerial photography; land exchange	577,191	571,125	571,125	- -

PROJECT STATEMENT - Contd.

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
10. Protection, development and management of the water resources of the national forests	\$57,784:	\$20,559:	\$20,559:	- -
11. Construction of improvements other than roads and trails (includes telephone lines, fences, lookout towers and observatories, fire breaks, offices, barns, garages, dwellings, outhouses, water developments, pipe lines, public camp grounds, landing fields, etc.)	137,449:	55,483:	55,483:	- -
12. Reforestation of denuded national forest areas	291,364:	257,149:	257,149:	- -
Covered into Treasury in accordance with Public Law 674	- -:	48,865:	- -:	\$-48,865
Unobligated balance	9,649:	- -:	- -:	- -
Total estimate 1944 and comparable amounts 1943 and 1942 ..	11,122,803:	12,710,691:	12,826,826:	116,135

INCREASES

The increase of \$116,135 in this item consists of \$48,865 decrease in travel funds (returned to surplus in 1943) and:

(1) An increase of \$165,000 under Project No. 5 "Timber and forest products sales, etc.," to handle an increasing volume of timber sales business on the national forests.

The demands for timber continue to increase and to meet these growing needs it is necessary to provide for the administration of increased sales of national forest timber. It is conservatively estimated that the volume cut will increase approximately 220,000,000 board feet in fiscal year 1944 over the cut of 1942. The following table shows the volume and value of timber cut in commercial sales and land exchanges beginning in the fiscal year 1939 and the cut estimated for fiscal years 1943 and 1944.

Fiscal Year	Volume of timber cut in sales and land exchanges MBM	Timber Receipts plus value of land exchange Dollars	Number of sales
1939	1,290,561	\$3,547,846	22,717
1940	1,740,271	4,924,924	27,512
1941	2,067,279	6,021,960	25,553
1942	2,204,749	6,629,105	23,889
1943	2,434,000 *	7,300,000 *	24,000 *
1944	2,649,000 *	7,900,000 *	25,000 *

* Estimated

The increased use of timber and forest products of all kinds has been directly felt in increased demands for national forest stumpage. Development work such as long-range planning and surveys of timber not directly connected with immediate sales work have been eliminated to all practical purposes. Short cuts such as sales by tree measurement and lump sum are being taken wherever possible.

The increase in expenditures, in spite of the added costs imposed by the impacts of war, will result in increased returns to the Government in Treasury receipts and land received in exchange for timber. In addition, the timber will be processed into vital, scarce, and strategic materials.

The increase requested will be used for marking trees to be cut, supervising the cutting in accordance with the terms of timber sale agreements, scaling logs or other products to determine the volume cut and removed as a basis for payments, and for surveys and appraisals of new logging chances.

CHANGE IN LANGUAGE

The estimates include a proposed change in the language of the proviso dealing with aerial fire control activities as follows (new language underscored):

**** the maintenance and operation of aerial fire control by contract or otherwise, with authority to renew any contract for such purpose annually, not more than twice without additional advertising; ****

An authorization to enter into renewable annual contracts for airplane service is necessary for the most efficient, safe and economical employment of aircraft in forest protection activities. Safe and efficient use of airplanes in forest fire work requires a type of airplane not in common use. There is no completely satisfactory design in commercial production and planes adaptable to the need are extremely scarce.

Under present restrictions which permit renewal of contracts only after determination each year, through advertisements for bids, that lower prices are not obtainable, bidders are assured of but one year's hire. At the expiration of that period the contractor is faced with the possibility of losing the contract to a lower bidder for the ensuing year. Therefore, in view of the large investment in equipment not readily adaptable to other uses, all bidders must protect themselves by quoting high prices, since to be safe, bidders must quote a price sufficiently high to include full amortization within one year or season for all special equipment and alterations required by the contract. If renewals were possible, amortization costs could be spread over a longer period, thus enabling the bidders to quote lower prices.

Such renewal would be at the Government's option and contract would be renewed only where the previous service has been satisfactory.

An equally important reason for renewable contracts is the need for piloting by operators experienced in the work. Few pilots are qualified to operate planes safely through the extremely rugged mountainous areas common in

national forests, where flying must be accomplished without aid of beams, beacons, and other facilities available to commercial plane pilots and over terrain where landing is extremely hazardous. Likewise, techniques in piloting planes engaged in scouting fires, dropping supplies and parachute smokechasers require skill acquired only through actual experience in mountain flying. It requires considerable experience in such work to develop sufficient knowledge and skill to insure safe piloting among the mountain peaks and through narrow canyons. Few such pilots are now available.

Under the present contracts limited to one year there is the possibility of losing the services of skilled, experienced mountain pilots through change of contractors each year, thereby increasing the risk of injury or death.

Renewable contracts would usually make available to the Government the experience and skill acquired in the service of the previous years. Such experience, paid for by the Government, constitutes an important investment from which continuing benefit should be derived.

Authorization permitting renewal of contracts would tend to decrease rather than increase cost of the service, with greater efficiency and safety.

WORK UNDER THIS APPROPRIATION

General: This appropriation covers all activities relating to the administration, protection and development of the national forests except the special appropriations for roads, trails, white pine blister rust, acquisition, and emergency fire suppression.

Objective: To manage, protect and develop the national forests and to utilize their timber, water, range, recreation, wildlife and other resources in such manner as will render the greatest possible service to the Nation as a whole.

Problem: Within the national forest boundaries is an area of 228 million acres, of which 178,404,000 acres are in Government ownership, or in process of acquisition. Geographically this area, which is equivalent to one acre in each ten in the continental United States, reaches into 40 states, Alaska, and Puerto Rico. Many tracts of privately owned lands are interspersed within the Federal holdings.

The protection and management of so vast an area presents difficulties and complexities not commonly found in many other governmental undertakings. National forests are managed under the multiple use principle. This means that practically all areas are used for, or serve, more than one purpose or objective. For example, 50 percent of the area within the national forests of the continental United States serves five different purposes, viz., timber production, watershed protection, forage production, wildlife production and recreation. An additional 28 percent serves four different purposes in varying combinations. An additional 21 percent serves three purposes. This leaves only 1 percent of the total which is reserved for one purpose exclusively, mainly, special use areas such as summer home sites, pastures, corrals, etc.

The above paragraph clearly demonstrates the necessity of careful planning in the management of the national forests, and brings into focus the interests which continually conflict and which must be reconciled by the managers of the national forest properties.

The protection of national forests from fire, insects, disease and trespass is made difficult by the large area to be protected, the general inaccessibility of the national forests, the many thousands of miles of exterior boundary, and the impossibility of taking preventive action when dealing with such a problem as lightning-caused fires (6,851 in the calendar year 1942 up to November 10).

Significance: The following is indicative of the economic importance of the national forests:

- (a) The area within the national forest boundaries is equivalent to some 10 percent of the area of the continental United States.
- (b) Sales and permits were granted in the fiscal year 1942 for the cutting of more than 2,800,000,000 feet of timber from the national forests. These contracts cover periods ranging from a few weeks to ten years.
- (c) They produced a cash income to the Federal treasury in excess of 7 million dollars in 1942 from the sale of timber products, grazing, and land rentals.
- (d) They provide range for over 12 million head of domestic livestock.
- (e) Nearly 4,000,000 people who live in and near the national forests are supported in whole or in part through the management and utilization of them and their resources.
- (f) They provide watershed protection of municipal water supplies for cities and towns with a total population of approximately 6,000,000 as well as water supplies which are immensely valuable to agricultural interests.
- (g) They provide a habitat for a large part of the big game animals of the country, and for millions of small game animals, birds, and fur-bearers.
- (h) They provide a measure of assurance of a future timber supply. In 1942 only 2,200,000,000 feet out of an estimated allowable annual cut of 6,500,000,000 feet were removed from the national forests.
- (i) They provide areas of land in large blocks already in Government ownership which are now being used for military purposes. Witness the transfer to the War Department of the Choctawhatchee National Forest, Florida, and the exclusive use by that Department of large areas of national forest land in Mississippi, Missouri, Colorado,

Louisiana, South Carolina, and California. In addition, many national forests have been used for maneuvers and for special military training projects.

Plan of Work: To facilitate administration, the national forest area is divided into 10 regions, 146 national forest administrative units, with 766 ranger districts averaging approximately 300,000 acres in size, or 7-1/2 times the area of the District of Columbia. The personnel of the basic organization, which is charged with the field administration and general operation of these geographical units, is also responsible for the protection of the national forests from fire, insect and tree-disease epidemics, and trespass, and for the integration of their management with economic and social problems of both national and local scope, in order that the natural resources of the national forests will contribute as fully as possible to the solution of such major problems as the production of needed timber and other forest products, utilization of forage without injury to the vegetative cover, flood control in major and minor watersheds, demands for outdoor recreation by millions of people, the permanency and continued prosperity of dependent communities, war activities, etc. The members of this basic organization manage all activities on their respective geographical units.

This basic organization is supplemented by fire guards and lookouts during the fire season; by temporary laborers on insect control, planting, maintenance, construction, and survey projects; by cruisers, scalers, and lumbermen engaged in timber activities; and by the year-long technicians which are necessary for the proper handling of functional activities such as fire control, timber sales, range management, reforestation, etc.

Examples of Progress and Current Program:

General management, operation and regulation of national forest properties, including enforcement of Federal laws and regulations applicable to the national forests: This project was established for the primary purpose of showing the cost of the basic (skeleton) forest and ranger district organization, the members of which are directly responsible for all programs on their respective units. This means that they must constantly adjust their programs of work to meet economic conditions which bring about a very strong demand for national forest timber and other forest resources; emergencies, such as forest fires and insect epidemics, war activities, and shifts in population; etc. No changes occurred in 1942 in the number of forest supervisor or ranger district units, despite the fact that 750,000 acres of land were added to the national forests during the year.

Maintenance of improvements other than roads and trails: The complete elimination of CCC on June 30, 1942, precipitated a critical situation in this project. CCC enrollees had been relied upon to a large extent to maintain many of the improvements on the national forests. While maintenance work may be postponed on some classes of improvements, other improvements must be maintained annually if they are to serve their purposes at all. Improvements in this category are telephone lines, lookout towers, guard cabins, range and administrative fences, water development projects, etc., all of which are of vital importance to the fire control and range management activities.

To provide even rudimentary maintenance to these high priority projects it was necessary to divert funds from other projects, mainly Projects Nos. 7, 8, and 11.

During the fiscal year 1942 the appropriation contributed to the maintenance of the following national forest improvements:

- 64,025 Miles of telephone lines
- 10,832 Miles of firebreaks
- 3,282 Lookout houses, towers and observatories
- 73 Airplane landing fields
- 3,594 Dwellings (rangers, guards, scalers, etc.)
- 3,290 Barns, garages, and warehouses
- 770 Offices at rangers and supervisor headquarters
- 1,994 Water development projects at ranger and guard stations
- 4,675 Miles fences other than range
- 2,300 Camp grounds
- 572 Picnic areas
- 1,381 Camp and picnic areas
- 201 Swimming areas
- 222 Winter sports areas
- 21,406 Miles range fences
- 712 Corrals
- 6,392 Miles stock driveways
- 923 Bridges
- 12,598 Range water development projects

The above table does not include the thousands of small buildings, such as woodsheds, rootcellars, tool caches, and other outbuildings for which annual maintenance charges per building are small. Neither does it include the wide range of miscellaneous projects which are comparatively small in number within the individual classes. Examples of such improvements are dams, power lines, power plants, stream improvements, docks, "pump sets," rearing ponds, etc.

Forest fire control including prevention of fires and maintenance of a detection and "smokechaser" organization: Timber, grass, and brush fires, unless they are prevented or promptly extinguished, can seriously impede our war effort and even give positive aid to the enemy. Such fires may damage or destroy timber needed for vital war uses, and may destroy forage needed for equally essential livestock. If fires reach any size, their suppression may rob farms, factories, and even military establishments of precious manpower, and the damage caused to watersheds, communications, and other facilities may still further interfere with war production. Smoke from such fires may interfere with pilot training, and, along the coast, make it harder for our air patrols to spot enemy subs and enemy planes; and the glow of fires along the coast makes it easier for enemy subs to make night attacks against our shipping. During the past year, all of these effects have been reported.

Forest fire control and its related fire prevention work is an activity in which success is represented by the smallest number of fires, lowest acreage burned, lowest damage to the forests, and lowest fire fighting costs. Fire control is a struggle to more effectively prevent and control fires against increasing numbers of forest users and recurrent adverse climatic conditions. Weather conditions, including lightning, also the movements and careless actions of the forest visitors, may entirely change one year's fire suppression results from those of the previous year. During the calendar year 1940 the total number of fires increased from 15,824 in 1939 to 17,053. Man-caused fires decreased from 8,555 to 8,151 and the total area burned inside of national forest boundaries dropped from 355,933 acres to 295,068. Both the total number of fires and the acreage burned in 1940 are above the average in those categories for the five-year period 1933-1939, which were 13,709 fires and 259,973 acres. During the calendar year 1941 a total of 11,953 fires occurred with a burned area of 373,834 acres, and in 1942 the total number of fires on the national forests and adjoining outside areas from which fires are a threat probably will be less than 12,000.

The following are examples of progress and type of program: The 40-man crew was originated in Region 6 (Oregon and Washington) as a mobile, self-contained crew especially selected and trained in use of the "One-Lick-Method" of progressive fire line construction. Both the 40-man crew concept of organization and the "one-lick" technique of line construction have been accepted as a sound management plan and have spread to other regions, with modifications to meet local conditions. With a serious reduction in available well-qualified manpower, the need for use of machinery and special equipment became greater on the national forests in 1942. Tractors in Region 5 (California) were used to construct 139 miles of fire control line on the national forests, replacing thousands of man-days of labor. This plan is followed also in some other regions when found practicable. Also trucks carrying water tanks, power pumps, and hose have been developed and used by several regions on fires along roadways and trailways in the national forests with good effect and saving in labor.

The use of parachutes to transport skilled fire fighters from airplanes to forest fires in isolated locations difficult to reach by other means has developed beyond the experimental state and has been accepted as an essential part of fire control practice. During the summer of 1942, 66 individual jumps were made to fires in roadless areas. The total cost of suppressing 16 of the forest fires which were handled exclusively by smokejumpers was \$9,450. Estimates of experienced forest officers reliably indicate the probable cost of suppressing these fires by other methods at \$75,500. No accidents occurred in the 1942 parachute activity, though jumps were made in more difficult terrain and probably under less favorable air conditions than in previous years. Due to the scarcity of manpower a new high was established in 1942 in the use of airplanes for transportation of men and supplies and equipment. Trained and equipped crews with up to 100 members were quickly shifted distances of several hundred miles. This increased mobility enabled more work to be accomplished with fewer men and several bad fire situations were successfully handled. In those parts of the Northwest where

manpower is short and distances are great, increasing dependence will be placed on this mode of transportation. This makes urgent the improvement of existing landing fields on the national forests.

During the calendar year 1942 considerable effort has been expended in the preparation and execution of forest fire prevention and suppression plans to meet the threats to national war programs which may arise through the action of incendiaryists, saboteurs, or an enemy nation. This has involved cooperation with the War Department in the expansion and operation of aircraft warning communication nets; expansion of the regular fire plans and fire organization to insure protection from serious damage or destruction of strategic timber producing areas on the national forests which are supplying wood products vital to the war effort; also employment and training of large numbers of raw recruits to replace experienced fire guards and fire fighters who entered military service or transferred to war industries jobs at increased pay. The liquidation of the CCC in the spring of 1942, trained enrollees of which had contributed much time to fire control work on the national forests, complicated the situation at a time when manpower was already a problem.

Control of tree-destroying insects and rodents on national forests:
During fiscal year 1942 the work under this appropriation was confined primarily to the control of forest insect pests in western national forests. Practically all of the work was done in an effort to control infestations of several species of bark beetles. Although insects continue to be a serious threat to the forests of the Nation, 1942 showed some reductions in the known infestations over those of previous years.

Altogether 49,260 trees were treated on 268,277 acres. The total cost of the work was \$203,031, or an average of \$4.12 per tree. Both CCC and WPA labor were used on this work to the full extent of their availability in the localities where the work was required.

The epidemic in the Wasatch National Forest in northeastern Utah again was the most serious outbreak on the national forests. Treatment of 21,155 trees checked and made noticeable progress in the control of this infestation of the mountain pine beetle which occurred in extensive lodgepole pine stands located in rough terrain at high elevations. Prompt and vigorous action in controlling a serious outbreak of the same beetle on the adjoining Ashley National Forest helped to bring a bad situation there largely under control.

Further extensive tests were made during the year of the method of cutting the trees and spraying the infested portion of the boles with a chemical which penetrates the bark and kills the insects. This method was developed by the Bureau of Entomology and Plant Quarantine and further refinements of technique were given thorough trials. This method of control promises to reduce the cost of treatment and eliminate the danger that accompanied the burning method. Since the chemical used contains some scarce and vital materials needed in the production of war supplies, the use of this treatment was limited to supplies on hand. Extensive use of the method will have to be postponed until after the war when supplies again are available.

Timber and forest products sales, free and administrative timber use, timber surveys, management plans, and timber stand improvement: In the fiscal year 1942 the cut of national forest timber exceeded all previous years. The demand for lumber and wood products to meet the insatiable war requirements of the Nation were in part met by this cut. The \$148,500 increase in the fiscal year 1942 appropriation over previous years and the conversion of other funds to this high war priority work made it possible to handle this all-time peak cut. Wet weather in the Inland Empire made logging difficult for a part of the year when logging is ordinarily carried on, kept the cut in that section below 1941 or a still heavier total cut might have materialized.

Timber Cut in Sales and Land Exchanges

Fiscal:		Timber Cut MBM		:Timber Receipts and Value:		
Year :	Sales	:Land Exchange:	Total	: Receipts	:Land Exchange:	Total
1942 :	\$1,559,702:	\$645,047	:\$2,204,749:	\$5,042,749:	\$1,586,199	: \$6,628,948
1941 :	1,552,270:	515,009	: 2,067,279:	4,789,040:	1,232,920	: 6,021,960

Allocation and issuance of grazing permits, supervision of range use by domestic livestock, range surveys and range management plans on national forests: Efforts the past year have emphasized two main objectives. First, protection of the ranges against fire, overgrazing and other abuses so as to prevent disruption of maximum supplies of meat, wool, shearlings, hides and other essential raw materials needed for military and civilian use. Second, management of the ranges so as to insure maximum production of livestock and livestock products without impairing the permanent productivity of the forage.

It has been necessary for local field men to work in close harmony and spend additional time with livestock men and agencies dealing with livestock marketing and war production goods. They have had to exert continual effort to keep numbers of livestock in balance with grazing capacity; to obtain better seasonal use and more effective distribution of livestock over the range; to give special attention to range reseeding; to encourage herd improvement through culling and marketing of nonproductive animals. Only through continued expenditure of increased amount of time for field officers on grazing work can national forest ranges contribute their maximum to the war program.

Receipts from the grazing use in fiscal year 1942 amounted to \$1,595,125.86, an increase of \$166,034.91. Receipts in fiscal year 1943 probably will be around \$300,000 greater than fiscal year 1942.

In handling the range management and administration of the livestock permitted on the 9,000 grazing allotments involved, the local forest officers have worked with the 800 to 900 small neighborhood livestock associations and advisory boards in determining the current season's plans and arranging for their application on the ground. The majority of the grazing allotment plans

are based on range inventories made by men trained in the technique of range surveys. Between 50 to 60 million acres of the national forests have been covered by range surveys.

During the calendar year 1941, 19,098 pay permits were issued for the grazing of 1,175,749 cattle and horses; and 5,060 pay permits for 4,787,369 sheep and goats on approximately 80 million acres of national forest range. In addition, free use permits were issued to 13,783 owners for 112,896 cattle and horses, 12,939 sheep and goats, and 19,847 swine on the national forests. These figures include only mature livestock, but if calves and lambs are counted it would show that about 12 million grazing animals used the national forests in 1941.

Protection and utilization of the wildlife resource, preservation of forest conditions conducive to the propagation of wildlife, reduction in number of game animals in overstocked areas, wildlife surveys and management plans: The maintenance of game animals rests on the productivity of forage on national forest lands and the maintenance of desirable populations involve the proper utilization of the annual crop. The economic and social significance of proper management can hardly be over-emphasized in terms of the beneficial results, and the terrific penalties of damage to the local communities to watersheds, soil and vegetation, and loss of game by lack of proper management. To protect, maintain and develop the land the wildlife resources, vigorous and continued action is required. There are many critical areas where forest resources are being damaged by over-use, especially of deer and elk, where management is necessary to maintain valuable populations of beaver and marten and to increase food and cover for all types of wildlife. To determine the amounts of use an area is capable of supporting requires men and time to do the work on the ground, and to build confidence in the public and cooperating agencies.

Big game, with few exceptions, is increasing each year on the national forests. The principal increases in 1941 are as follows:

	<u>1940</u>	<u>1941</u>	<u>Increase</u>
Whitetail deer	522,000	558,000	36,000
Mule deer	1,036,000	1,085,000	49,000
Blacktail deer	255,000	273,000	18,000
Elk	154,000	160,000	6,000
Antelope	20,000	24,000	4,000
Black bear	<u>63,000</u>	<u>67,000</u>	<u>4,000</u>
Totals	2,050,000	2,167,000	117,000

A total cropping of big game in 1941 produced to the consumer about 14,000,000 pounds of meat and over 200,000 hides while the increase would represent an additional 8,600,000 pounds of meat and over 100,000 hides, or a total of 22,600,000 pounds of meat and 300,000 hides. If properly harvested, the production would amount to 35,000,000 pounds.

In addition to the total of big game of 2,200,000, there are about 6,250,000 game birds and 10,600,000 fur-bearers. This represents the productive phase. In addition, there are about 450,000 larger predators of which over 10,000 are mountain lions and wolves which must be controlled in the interests of both game and livestock use of national forest lands.

At the present time overpopulations of deer and elk constitute a reserve of meat which, if properly harvested, can contribute not only to war needs but, by balancing use with available forage, insure continuous production.

The big game use of forage on national forest lands now totals 6,712,000 cow months while the use by domestic livestock is 10,653,000 cow months. In other words, 39 percent of all forage is used by big game and 61 percent by livestock.

The harvest of big game, especially on overpopulated areas, is essential at this time in order to keep it from destroying the forage and starving and also competing unnecessarily with livestock use. Problems of overpopulation requiring special attention are found for elk on 24 national forests and for deer on 38 national forests. Other economic uses such as livestock use, timber production and even flood control and erosion are involved in these problem areas.

Effort is being directed (1) to secure a direct contribution to the war needs by cropping the fish and game resource -- chiefly meat, hides, and fur; (2) to prevent harmful effects of overpopulation of wildlife species on the plant and soil values; and (3) to handle predator and pest control to insure the production of game, livestock, and timber.

Enforcement of sanitary laws, garbage disposal, policing and other requisite measures for safeguarding health and safety of national forest users: Situated as they are in forty of the states, including within their boundaries one-tenth of the total area of the forty-eight states, ranging from coastal plains to the highest peaks of the Nation, threaded with tens of thousands of miles of streams and dotted with tens of thousands of lakes, rich in wildlife and natural interest, the national forests necessarily are subject to an enormous volume of public use for purposes of outdoor recreation. Their contributions in this field are of incalculable social and economic significance. Through their recreational use thousands of communities derive revenues essential to their economic existence and millions of people enjoy recreational opportunities which would not otherwise be available to them. They now contain 4,258 camp and picnic areas, 201 developments for swimming, 254 winter sports areas, and 55 organization camps, sponsored and frequently operated under permit by welfare organizations or charitable groups and designed to afford vacation opportunities to underprivileged classes. Additionally, 11 hotels or resorts initially developed as features of various public programs have been placed under Forest Service administration.

These 4,774 national forest recreation areas in the aggregate occupy 88,846 acres. Under normal conditions of use they can at one time meet the

requirements of 480,000 people. In 1941 over 18 million people used these areas, exclusive of transient occupants of other undesignated areas and of the many millions who simply motored through the national forests to observe their beauty and interest or who traversed them en route to other destinations. The supervision, maintenance, and policing of such large areas, used by so many people, is a tremendous job. Sanitary facilities must be kept fully efficient to protect public health, garbage and debris must be collected and disposed of at frequent intervals during the seasons of use, and the wear and tear on improvements due to heavy and relatively unrestricted use promptly must be repaired if the destruction of such improvements is to be averted.

Until recently, the requirements of recreational area development, maintenance, and supervision largely have been met with ERA and CCC personnel. Such services are no longer available. Regular forest rangers and guards have been compelled to assume a great deal of the burden, performing much of it as overtime work. Recreation areas have been posted with signs apprising the general public of the lack of personnel requisite to the management and protection of the areas and soliciting the cooperation of the public in keeping such areas clean and orderly. Increased use has been made of the standby time of fire suppression and prevention crews located near the most heavily used recreation areas, but such services are available only when they can be spared from regular fire suppression and prevention work, which is rather infrequently since the periods of high fire danger largely coincide with the periods of recreation use.

Land-use management on the national forests, including rental of land, land classification; action on claims entered under public land laws; location and posting of national forest boundaries; general surveys, plans and maps; aerial photography; and land exchange: The national forests contain literally tens of thousands of tracts adapted to and needed for purposes of commerce, industry, and public service, the use of which strongly is dictated by all considerations of local economy and welfare. The national forest lands also are subject to the Forest Homestead Act of June 11, 1906, which fact necessitates continuing study and modification of earlier classifications. Those of the national forest lands withdrawn from the public domain are subject to the provisions of the general mining laws and to a variety of other public land laws in relation to which the personnel of the Forest Service conducts the primary phases of examination, report, and administrative action. Certain other activities, such as the posting of national forest boundaries, the accomplishment of certain types of general survey, maps, and aerial photography are indispensable. More than seventy statutes now authorize land exchanges within or contiguous to national forests. The estimate under consideration is to finance the conduct of these activities.

Occupancy and use of national forest lands for a wide variety of public and private purposes is authorized by special use permit. The reporting of such permits for the fiscal year 1942 was discontinued as a war measure, but at the end of fiscal year 1941, there were in effect 44,010 special use permits covering nearly 2 million acres of public land and over 20,000 miles of telephone line, railroads, roads, pipe lines, drift fences, etc. In that

same year, 6,621 new permits were issued whereas 5,738 were abandoned or transferred. During the fiscal year 1942 such special use permits returned to the Treasury \$386,810.52.

One phase of such special use is the development of minerals upon lands purchased under the Act of March 1, 1911, or donated under the Act of June 7, 1924, or the Act of March 4, 1917, providing for the disposal of the minerals of such land by permit under the authority of the Secretary of Agriculture. At the end of fiscal year 1941, 469 such permits were in effect, involving over 26,000 acres.

On lands acquired under the Weeks law or donated under the Clarke-McNary law, there has been increasing development of oil and gas in conformity with the policy and procedure of the Department of Agriculture. Up to December 1, 1942, five such leases had been executed covering 2,509.39 acres and yielding a bonus revenue to the Government of \$4,920.40, while two additional cases were under consideration, and one bid had been rejected. In this activity, technical advice is obtained through cooperative arrangement with the Department of the Interior, but the administrative phases of the work are conducted by the Forest Service.

Special uses of national forest lands by the armed services in connection with the war engender need for special types of protection and adjustment, since they frequently necessitate the suspension or termination of civilian uses and the introduction of activities not consistent with the normal economy of the areas occupied. At the end of the fiscal year 1942, the War and Navy Departments under authority from the Secretary of Agriculture were occupying 17 specific areas, involving 508,965 acres of national forest land in 10 national forests, 7 states, Alaska, and Puerto Rico; while since that date the Secretary (to November 30, 1942) has authorized occupancy by the War Department of an additional 50,995, comprised of 6 different areas in 5 states. Additionally, many applications by field officers of the War and Navy Departments for the temporary use of national forest lands for maneuver purposes or more permanent uses for other purposes have been approved by local forest officers.

Homestead and mineral claims under the general land laws continue to require attention. In relation to such claims the Forest Service field officers make the examinations and prepare the reports for consideration by the Department of the Interior. The stimulation of mineral production as a result of the war suggests that mineral development on lands formerly part of the public domain will increase rather than diminish during ensuing years.

Associated with the special use of national forest lands is a problem and requirement of rehabilitation, which demands considerable attention by the field officers of the Forest Service. In the three eastern regions alone -- the Eastern, the Southern, and the North Central -- there are approximately 178,000 families resident within the national forest boundaries, 2,500 such families being actual tenants on national forest lands. The Laurel Ranger District of the Cumberland National Forest, Kentucky; the Pond Fork Unit on the Mark Twain National Forest, Missouri; and the Five County Area in

Wisconsin are the subjects of interbureau agreements. Besides this general rehabilitation program, work has progressed on the two forest communities, Sublimity in Kentucky and Drummond in Wisconsin, established with the aid of the Farm Security Administration.

Accurate maps are essential for adequate and efficient protection, development, and administration of land and resources. These are generally prepared from aerial pictures which serve not only for map production but a variety of activities such as fire control, range surveys, determination of the distribution and density of timber and many other purposes. Aerial photographic coverage of 5,833 square miles was obtained during the year. Planimetric maps were prepared from pictures and other available data for 13,284 square miles. Topographic maps made by ground methods totaled 656 square miles. Fifty-one maps were published, of which 25 were on 1/4-inch scale, 17 on 1/2-inch, and 9 on 1-inch.

During the fiscal year ending June 30, 1942, the Secretary of Agriculture approved 213 land exchanges in accordance with the provisions of the General Exchange Act of March 20, 1922, and 104 land exchanges under the Act of March 3, 1925, making the total of 317 approved exchanges for the year. As a result of such land exchanges with private individuals, the Government will receive 332,377 acres of land appraised at \$1,844,811.31 in exchange for 46,664 acres of national forest land valued at \$116,315.38 and \$1,511,865.71 worth of national forest stumpage.

Protection, development and management of water resources of the national forests: The inventory of erosion problems initiated in 1939 continued in four regions in which the work was incomplete until the outbreak of war when surveys of this kind were placed largely on a basis of meeting emergency situations. Information gathered in erosion surveys is currently used in land management activities, and particularly is of value in the management of range lands.

Surveys of national forest water resources and uses, initiated in 1941, were deferred until the post-war period.

Construction of improvements other than roads and trails: With minor exceptions, the funds expended under this project have been used to supplement CCC and other emergency work. With the discontinuance of CCC and the demands on the appropriation for other activities more closely related to the war effort, the expenditures under this project are being substantially reduced.

Reforestation of denuded national forest land: Twenty-five forest tree nurseries were operated in the calendar year 1941 to produce 144,272,000 seedlings and transplants. These were planted on 149,818 acres at an average cost of \$10.54 per acre. The services of both CCC and WPA were used as much as possible in accomplishing this program. In addition to planting trees, 1,865 acres were sown with 18,798 pounds of tree seed.

This will be the last year for some time when large acreages of nonproductive lands of the national forests are brought into production by tree planting. The loss of the CCC and WPA labor has been a severe blow. The forest nurseries will be maintained in a productive state in preparation for post-war activity. The policy in effect for fiscal year 1943 restricts tree seed sowing at the nurseries to those tree species which require more than two years to produce a plantable tree. Some planting by Conscientious Objectors from Selective Service Camps will be possible but this will be only a "drop in the bucket" compared to the job done during the CCC and WPA period just past.

National Planting Program

Location	Area planted in 1941		Seeded	Net total	Area
			Direct	Acres planted	remaining to
	Acres	Thousand Trees	1941 Acres	and seeded to date	be planted Acres
West of Great Plains	22,895	17,232	1,410	256,883	1,036,840
East of Great Plains	126,923	127,040	455	887,575	1,460,800
Total	149,818	144,272	1,865	1,144,458	2,497,640

(c) WATER RIGHTS

Appropriation Act, 1943	\$10,000
Budget estimate, 1944	9,410
Decrease (including decrease of \$100 travel funds returned to surplus)	<u>-590</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. Investigation and establishment of water rights	\$19,155	\$9,900	\$9,410	\$-490 (1)
Covered into Treasury in accordance with Public Law 674	- -	100	- -	-100
Unobligated balance	845	- -	- -	- -
Total estimate or appropriation ...	20,000	10,000	9,410	-590

INCREASES OR DECREASES

The decrease of \$590 in this item for 1944 consists of \$100 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$490 which will be met by curtailing the water rights survey and filing program in the field.

WORK UNDER THIS APPROPRIATION

Objective: To secure and to assure protection of the right of the Government to divert and use water necessary to the administration, development, and utilization of the national forests; also, as soon as possible, to establish Federal ownership of as much water as is essential to the full use and management of the national forests.

The Problem and its Significance: Except in the states operating fully under the riparian system for diverting and utilizing the natural flow in streams or of storing such in reservoirs, an appropriate state agency decides the individual company or agency which shall have the right to divert or store water, the amount of water, the purpose of use, and the place of diversion or of storage. Prior to securing an "adjudicated right" or "decree" to the water, a survey must have been made, an application filed, such fees as required paid, and a permit secured authorizing the diversion or storage of not exceeding a specified amount of water. Actual use for the approved purpose during a certain period of time is required before a claim can be made for an adjudication or a decree covering the amount of water which has been actually diverted or stored and for the approved purpose. In the event, however, that the water of a stream previously has been entirely "appropriated," a right to use can be secured only by purchasing an earlier water right either separately or with the land itself.

The Forest Service uses water for ranger stations and other administrative areas, forest nurseries, public campgrounds and other recreation areas, lakes, swimming pools, fire protection, stock watering ponds, impoundments for flood and erosion control work, miscellaneous water supplies, and in other ways. The number of uses is very great, but the amount of an individual diversion or storage is usually very small. An uncontested right to the use of the required amount of water is essential to the purpose of the activity or project upon or for which used. Accordingly, immediate action by the Federal Government was necessary to protect past investments and to make certain of adequate water supplies for current projects and those definitely planned in the future.

Plan of Work: The work in the Rio Grande and Colorado drainages is approaching completion which permits increased attention to other western areas particularly California.

Progress and Current Program: From July 1, 1936 to June 30, 1942, total expenditures were approximately \$96,097. After expending the \$9,900 appropriated for the fiscal year 1943, it is estimated that \$45,000 will be required to complete the program for facilities now in existence.

(d) FIGHTING FOREST FIRES

Appropriation Act, 1943 \$100,000
 Budget estimate, 1944 100,000

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)
1. Fire suppression	\$2,045,477	\$67,000	\$67,000
2. Protection of unappropriated public forest lands	104,523	33,000	33,000
Total estimate or appropriation	2,150,000	100,000	100,000

WORK UNDER THIS APPROPRIATION

Because of the impossibility of predicting in advance what expenditures will be necessary in suppressing forest fires, Congress has for 30 years followed the practice of appropriating only a nominal sum in the annual appropriation act. Supplemental estimates are submitted after the close of the summer fire season for expenditures actually incurred in excess of the regular appropriation, plus an estimated amount for the period remaining in the fiscal year.

Fire suppression: This project covers emergency fire control expenditures in connection with the suppression of forest fires on the national forests. Administrative restrictions placed upon the use of these funds by the Forest Service provide that expenditures shall not be made therefrom until forest fires have actually started. An exception is made to this rule, however, when fire conditions become so critical that the regular protective organization, which is financed from the appropriation "National forest protection and management," is unable to cope with the situation and when, therefore, the temporary employment of additional guards clearly will reduce expenditures for fire fighting.

Expenditures are made for the employment of fire fighters and their transportation, and for equipment needed on going fires when not available in stocks of equipment previously purchased. Expenditures are made for the travel expenses of forest guards when going to or returning from fires and for the travel expenses of regular employees of the Forest Service when the travel extends beyond the boundaries of the units to which they are regularly assigned, or when the activities to which men are regularly assigned do not include fire fighting.

Protection of unappropriated forest lands: Unappropriated public forest lands are widely scattered throughout the entire West. In many cases protective associations, organized to protect privately owned lands, and certain states were compelled, prior to fiscal year 1938, to protect the public forest lands

intermingled with the private lands. Under cooperative arrangements which have been worked out between the Forest Service and the timber protective associations and states, the Federal Government now bears its fair share of the cost of protecting these public lands. The accounts of these cooperatives are audited by the Forest Service and the per acre cost of protecting the public forest land is based upon a total figure from which all improvements and development expenses have been eliminated.

There was an increase of 64,640 acres in the amount of unappropriated public domain lands receiving forest fire protection during the calendar year 1941 over the previous year. The total area protected in 1940 was 2,805,246 acres. In 1941 it was 2,869,886 acres.

(e) PRIVATE FORESTRY COOPERATION

Appropriation Act, 1943	\$114,000
Proposed transfers in 1944 estimates to:	
"Salaries and expenses, Bureau of Agricultural Economics, economic investigations"	-1,558
Total available, 1943	112,442
Budget estimate, 1944	111,942
Decrease (travel funds returned to surplus)	<u>-500</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. Private Forestry Cooperation	\$111,508:	\$111,942:	\$111,942:	- -
Covered into Treasury in accordance with Public Law 674	- -:	500:	- -:	\$-500
Total estimate 1944 and comparable amounts 1943 and 1942	111,508:	112,442:	111,942:	-500

WORK UNDER THIS APPROPRIATION

Objective: To increase to the extent needed the production of forest products necessary for war and essential civilian use, by advising and assisting private forest land owners to provide the essential products with the most effective use of labor and with minimum injury to the productivity of the vitally important forest land resources involved.

The Problem and its Significance: The numerous restrictions on the use of lumber and other forest products, many of which were necessitated by shortages of the available material, emphasize the critical nature of our forest product production problem.

On the other hand, 25 percent of the total land area of the United States is classified as commercial forest land. Seventy-five percent of this 462 million acre area, and probably 90 percent from a productivity standpoint, is in private ownership. With this vast area of private forest land why is the Nation, within one year after the start of the war, in a critical condition in regard to the output of needed forest products? Part of the answer lies in the wasteful and destructive cutting practices which have been applied in the harvesting of forest products from most private forest land. Part of the answer lies in the lack of labor available to existing logging operations. This is intensified by the relatively inefficient use of the labor now being utilized by most private forest land owners and operators.

The greatly increased demand and increased prices for forest products have resulted in a material increase in the severity and injurious nature of the cutting done by most timber operators. If this action was necessary to provide the forest products needed for our war or essential civilian use, no one would question the sacrifice. All information available, however, indicates that such action is unnecessary, and in most cases detrimental to the most efficient harvesting of the needed material. Studies have indicated that the needed products, in most cases, could be obtained under cutting practices which would leave the land in a reasonably productive condition and with an actual saving in labor, as compared with production of equal volumes under destructive or injurious cutting practices.

The present major problem of this activity is, therefore, in cooperation with associated agencies and industrial groups, to inform and assist private land stumpage owners and logging operators to produce the forest products needed for our war effort through more effective use of the labor available and more efficient and less destructive methods of cutting.

The private forestry cooperation problem as a whole breaks naturally into four major sub-problems or projects. These may be mentioned in brief as work with (a) industrial or large timber land owners, (b) small forest land owners, (c) Forest Product Cooperative Associations, and (d) Naval Stores program and other miscellaneous problems or jobs. Action in connection with each of these problems or projects is presented in brief under the next caption.

Examples of Progress and Current Program: (See following table for summarized factual report to January 1, 1942.)

The following factual report on private forestry cooperation work to January 1, 1942, shows that 2,344 private forest land owners have been contacted. It indicates that as a result of these contacts 73 percent of the owners, possessing over 16 million acres of private forest land, have improved their forest management practices. The report also shows that less than 1 percent of the private forest land owners have been contacted in connection with this project.

Since the start of the war primary emphasis of the private forestry cooperation effort has shifted from advising and assisting owners on the long time management of their forest resources, to primary emphasis on assisting owners and operators to produce and harvest most efficiently those forest products needed for war and essential civilian use. It has been demonstrated, for example, that the production of hardwood veneer logs in the Lake States can be increased by 13 percent (from 27 percent to 40 percent), with a given amount of labor, by selective cutting as contrasted with clear cutting. Despite this, about 90 percent of cutting on private forest land in the hardwood stands of the northern Lake States, which supply much of our aircraft veneer, is destructive clear cutting. Studies also show that it takes 50 percent more time to produce a given volume of southern pine lumber from logs 7 inches in diameter than from logs 14 inches in diameter, but despite this, cutting and sawing of trees only able to produce logs 7 inches or 8 inches in diameter is still commonly practiced.

Private forestry cooperation work with forest industries and large timber land owners was continued and extended into the redwood type in California. Most of the work consisted of economic analyses of timber stands to advise the owners and operators concerning the trees which should be cut and those which should be left to harvest most efficiently the forest products. The owners involved usually contribute 50 percent of the cost of each economic analysis and assign a capable man to participate, and who is taught the techniques of the work so that he may continue similar studies for the owner. Two bulletins, namely, "Comparison of Investment and Earning of Hardwood Trees in the Northern Lake States," and "Results of Forest Cutting Practices in Various Lake State Timber Types," were prepared and issued which will be of major value to private forest land owners and timber operators in the Lake States.

Private forestry cooperation work with small forest land owners was continued in close cooperation with state forestry agencies. To date, however, it has been possible to assign a man to handle this cooperative work to only five individual states. The work of these men consists of advising and assisting private forest land owners how to manage and harvest best their forest products, with special reference to those products needed in our war effort.

Private forestry cooperation work with forest cooperative associations included guidance and assistance to more than a dozen associations located in the eastern United States. These cooperative associations are now in their early years but with proper assistance can and should be strengthened to the point where they will be able to contribute materially in furnishing the forest products essential for our war effort.

Private forestry cooperation during the past year also included the supervision and administration of the naval stores agricultural conservation program for the AAA. Increased production of turpentine and rosin is urgently needed in our war effort. New techniques were developed and made available which enabled owners of naval stores timber to increase materially the yields of these needed products. Much work was also done in investigating

plant facilities available for the increased production of the several forest products needed for war and essential civilian use. This information was urgently needed to ascertain where the increased production of each essential forest product might best be accomplished.

SUMMARY

Private Forestry Cooperation Work

	<u>Total</u>	<u>Contacted</u>	<u>% Contacted</u>
(a) Contact work done and to be done:			
Number of owners	4,587,015	2,344	.051
Forest land acreage	313,117,898	33,035,057	10.38

(b) Results from contact work done:

Of the 2,344 owners contacted (33,035,057 acres)

	<u>Owners</u>		<u>Acreage</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
To sustained yield management	71	3	6,696,823	20
Additional owners to selective cutting	1,173	50	5,362,848	16
Additional owners to increased volume of timber				
left uncut	355	15	3,575,448	11
Additional owners to improvement cutting	73	3	258,640	1
Additional owners to planting or Timber Stand				
Improvement work	46	2	292,348	1
Total	1,718	73	16,186,107	49

In addition these owners employed 140 technical and 50 nontechnical foresters.

(f) FOREST PLANTATION CARE

Appropriation Act, 1943	\$ a/
Budget estimate, 1944	415,000
Increase	<u>+415,000</u>

a/ \$457,091 available in 1943 from the \$500,000 provided in the Sixth Supplemental National Defense Appropriation Act, 1942.

PROJECT STATEMENT

Project	: 1942	: 1943 : :(estimated):	: 1944 : :(estimated):	: Increase or decrease
1. Care of plantations and young growth	:\$ 42,909:	\$457,091 :	\$415,000 :	:\$-42,091 (1)
1942 appropriation obligated in 1943	: 457,091:	-457,091 :	- - :	:+457,091 (1)
Total estimate or appropriation	: 500,000:	- - :	415,000 :	:+415,000

INCREASES

(1) An apparent increase of \$415,000 for saving the investment already made in forest plantations.

In recognition of the urgency of this problem the Sixth Supplemental National Defense Appropriation Act, 1942, provided \$500,000 for this purpose to be available until June 30, 1943. Of this amount \$42,909 was obligated in fiscal year 1942 and \$457,091 will be obligated in 1943, therefore, while there is an apparent increase of \$415,000, there is actually a reduction in working funds of \$42,091.

Objective: To permit the protection of established forest plantations by the removal of competing brush and other growth.

Problem: The land acquired for national forest purposes, especially in the Lake States, included lands which had been so seriously depleted that no source of seed of desirable tree species remained and also lands so mistreated by uncontrolled burning that they became covered with brush and tree species unsuited to the site. These brush lands were unproductive and without promise of producing a usable crop unless planted. With thousands of acres of such land, forest rehabilitation became one of the major CCC projects in the national forests.

The CCC with some help from WPA and regular funds planted many thousands of acres of these brush areas and as needed, maintained the planted trees free from the smothering competition of the faster growing "weed" species. However, this protection work takes place from one to five years after planting;

therefore, with the constant reduction during the first six months of 1942 in the number of CCC camps and the discontinuance of the CCC program on June 30, 1942, many acres needing release work were left untreated. The elimination of competition by brush with the planted trees is necessary if we are to save the investment already made in growing and planting the forest trees.

Significance: At the close of the calendar year 1941, 1,126,118 acres had been successfully planted to forest trees. On June 30, 1942, there were 248,500 acres of these plantings that would in time be lost unless released from brush competition. Work during fiscal year 1943 will reduce this so that by June 30, 1943, approximately 180,000 acres of plantations will be left in urgent need of release work if they are to survive. These plantations represent an investment of about \$2,060,000. This imperiled investment can be saved if the project continues at approximately the same rate as in fiscal year 1943.

Plan of Work: The plantations most in need of release work are in the forests of the Lake States. Local farm labor will be used during their slack periods and in some areas labor not suited for war factory work, logging, mill work, or mining is available. Also short-term fire protection personnel will be given work during their off season. The work will be organized on a Forest and Ranger District basis with regular personnel supervising the project.

CHANGE IN LANGUAGE

A new appropriation item has been established to continue the work inaugurated by the deficiency appropriation of \$500,000 carried in the Sixth Supplemental National Defense Appropriation Act, 1942, approved April 28, 1942, as follows:

For the protection of established forest plantations and the maintenance of favorable growing conditions thereon, by the removal of injurious brush and other growth, \$415,000.

WORK UNDER THIS APPROPRIATION

Plantation release work consists of eliminating brush and tree "weed" species that grow much faster than the planted trees. The former are off their normal site and will not produce economic values. For this reason, the fast-growing brush overtopping and smothering them must be removed within a few years after planting. Unless this is done the majority of the planted trees are crowded out and the efforts (investment) in growing the trees in the forest nurseries and planting them is lost.

Plantation care work employs men who are not qualified by skills, location or inclinations for work in factories or other war work, or are part-time farmers, or employed part time on farms in and adjacent to the forest. This class of labor is unaffected by the war in many ways and remains available for work such as this. In addition, short-term fire guards are given employment when not needed for fire control purposes. Women may also be used on some of the lighter work. The crews are supervised by regular Forest Officers or qualified local men who have been employed for some time on a part-time basis.

Summary of Work Done

Not including CCC or WPA or other accomplishments
prior to the beginning of this project.

Planted area in need of treatment May 1942	255,000 acres
Acres treated fiscal year 1942	<u>6,500</u> acres
Planted area in need of treatment June 30, 1942	<u>248,500</u> acres
Acres to be treated fiscal year 1943 (estimated)	<u>68,500</u> acres
Planted area remaining in need of treatment as of June 30, 1943	180,000 acres

FOREST RESEARCH FUNDS

General Statement

During the past eighteen months major shifts in emphasis of research were made to meet war needs. The whole program, including the work of each of the regional forest experiment stations, as well as that of the Forest Products Laboratory, has been critically studied and reoriented on a wartime basis. This includes:

1. Undertaking special studies, surveys, and other jobs in the general forest or forest products fields for which the personnel of the Forest Service is best qualified to assist war agencies.
2. The use of research personnel to provide technical advice and guidance in wartime undertakings; including fire control action programs; short cuts in timber sales and logging to save time and meet labor shortages, etc.; soil stabilization and vegetative cover on various war construction projects; prediction of water supplies for power projects; and attaining increased production of meat, hides, and wool on livestock ranges.
3. Undertaking new work or intensifying going work that is needed to help win the war.
4. Adaptation of results and information of past and going work to meet specific war needs.
5. Finishing as quickly as possible projects or phases of projects that were nearing completion, and either preparing reports or assembling the results so that they can be made available without important loss after the war.
6. Shelving, until after the war, projects or phases of projects that were just getting under way or could be shelved without important loss after the war.

7. Reducing to a maintenance basis, until after the war, work on the many long-time projects which involve substantial investments in time and money and depend on continuity of observations for results, even though on a maintenance basis. Since forest and, to a lesser extent, range vegetation studies deal with slowly maturing plants and conditions, and involve many hundreds of experimental plots and thousands of periodic observations over a term of years, many of the studies are necessarily of a long-time duration, and certain minimum observations are necessary to avoid loss of past work and to maintain a thread of continuity for later restoration.
8. Continuing work on projects that promise usable results for use in meeting adjustments for the immediate post-war period, such as those which will furnish a basis for formulating or carrying out worthwhile emergency employment on forest lands.
9. Prompt analysis, and the making available, of results which are needed to guide war activities or to be used for guidance in the production of forest products, food, and other essential materials.

At the close of the fiscal year 1942, 80 percent of the research work of the Forest Service was being directed to meet wartime problems. This very large proportion of research effort included those projects furnishing direct assistance to the armed forces, or assistance through helping agencies or individuals that are directly aiding armed forces.

Thus, the entrance of the United States into the war found the research organization of the Forest Service with a background of information, accumulated during many years of work, highly useful in the war program, an organization skilled in many fields and familiar with the forest products and range livestock production problems throughout the country, and a program of work that could quickly be shifted over to rendering services, advice, and guidance in numerous ways to numerous agencies and to undertaking projects specifically needed to meet war problems, as well as to carry forward vital phases of its going research program.

Work on Forest Products Requirements, Production, and Supply: A most outstanding project is the Forest Products Requirements, Production, and Supplies Survey. Chiefly by diversion of manpower and equipment, but in part financed by funds from the War Production Board, this project was participated in, during the fiscal year 1942, not only by the research divisions but by the entire Forest Service. Arrangements have been made whereby the Forest Service will contribute the equivalent of one-half of the cost up to \$300,000, and the War Production Board will contribute the remainder, during the fiscal year 1943. It is designed to meet the increasingly urgent need on the part of the war agencies for information regarding the properties, location, available quantities, accessibility, production and processing facilities, and present and prospective demands for lumber, pulpwood, veneer, plywood, ship timber, specialty woods, naval stores, wood distillation products, cooperage, poles and piling, fuelwood, tanning materials and other items of wood. Examples of surveys completed or being undertaken under this project are:

- (1) Production and Stocks Estimates—State, regional, and national estimates of production of lumber by species at monthly intervals and of stocks on hand at mills at quarterly intervals.
- (2) Foreign Woods—Information on supplies, availability, production, quantity, and use of foreign woods.
- (3) Lumber Consumption—Comprehensive analysis and compilation of lumber consumption estimates for 1940-43, by construction and industrial uses.
- (4) Lumber Production Problems—Summaries of factors affecting lumber production, and recommendations for maintaining and increasing production.
- (5) Pulpwood—Survey of pulpwood production and requirements, as basis for placing entire pulpwood industry under an allocation system in order to secure equitable distribution to meet war and civilian needs.
- (6) Labor—Study to supply war agencies with information on the effect of shortages and reserves in the lumber industry on lumber production.
- (7) Wood Barrels for Rosin—A survey of cooperage and rosin producing plants to determine whether facilities are available for manufacture, and assembly of wood rosin barrels as substitutes for metal barrels now being used.
- (8) Raw Material Supplies—Furnished information and consultation service on problems of raw material supplies.
- (9) Special Items for Ship and Aircraft—Monthly statistics on shipments of pontoon lumber, marginal planking, aircraft lumber from certain western species and aircraft lumber from yellow poplar in the East.
- (10) Grain Bins—Special surveys to determine availability of lumber for grain bin construction as a substitute for metal and burlap containers.
- (11) Agricultural Packaging—As a part of the agricultural production program, determination is made of the lumber and paper required for packaging agricultural products.
- (12) Veneer and Plywood—A special Nation-wide study of supply and production facilities for woods suitable for veneer and plywood for airplane construction and other war uses.
- (13) Fuelwood—Surveys in various localities to determine the problems likely to be met if fuelwood is needed in greater quantity.
- (14) Ordnance Lumber Supply—A survey to summarize the direct and indirect lumber requirements of the Ordnance Department.
- (15) Rubber Tires—Study to determine the dependence of wood products industries upon rubber tires.

(16) Tannin—Survey to determine the availability of chestnut wood, and investigation of the possibility of harvesting of mangrove bark from Florida. Study of possibilities of increasing tannin from hemlock bark sources.

Requests for similar information have been furnished informally to the various war agencies through literally hundreds of calls—personal and by telephone, both in Washington and in the field.

In addition to this service-wide project, other war activities are reported upon in more detail under the respective divisions, including advice and technical service to the Emergency Rubber Project and the extensive series of activities under way at the Forest Products Laboratory; the fire, camouflage, and naval stores projects in the Division of Forest Management; the meat, hides, and wool production project in the Division of Range Research; and the water power predictions, soil fixation, and infiltration services to army basis and airports in the Division of Forest Influences.

(g) FOREST MANAGEMENT INVESTIGATIONS

Appropriation Act, 1943	\$556,500
Proposed transfer in 1944 estimates to	
"Salaries and expenses, Library"	-12,671
Total available, 1943	543,829
Budget estimate, 1944	514,900
Decrease (including decrease of \$1,829	
travel funds returned to surplus)	-28,929

PROJECT STATEMENT

Project	: 1942	: 1943	: 1944	: Increase or
	: (estimated)	: (estimated)	: (estimated)	: decrease
1. Silvicultural investigations	\$265,262	\$257,200	\$256,100	-\$1,100 (1)
2. Mensuration investigations	45,790	26,000	- -	-26,000 (1)
3. Forest regeneration investigations	87,535	73,250	73,250	- -
4. Fire protection investigations ...	95,648	102,000	102,000	- -
5. Naval stores investigations	33,550	33,550	33,550	- -
6. Forest genetics investigations ...	63,917	50,000	50,000	- -
Covered into Treasury in accordance	:	:	:	:
with Public Law 674	- -	1,829	- -	-1,829
Unobligated balance	6,687	- -	- -	- -
Total estimate 1944 and comparable	:	:	:	:
amounts 1943 and 1942	598,389	543,829	514,900	-28,929

DECREASES

The decrease of \$28,929 in this item for 1944 consists of \$1,829 in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$27,100 in "Forest management investigations," which has made it necessary to eliminate entirely the mensuration investigations and to cut the silvicultural investigations. The decrease will be met by a reduction in force, both permanent employees and temporary service, and a reduction in facilitating services.

WORK UNDER THIS APPROPRIATION

Objective: To supply the facts on which to base sound forest practices, specifically the information needed by Federal, state, and private agencies and by individuals, on how to reforest, protect from fire, improve and manage forest lands for efficient and permanent production of forest products and to maintain forest cover where needed for recreation, wildlife, and watershed protection.

Much of the year's effort and most of the work immediately ahead is on war problems.

The Problem and its Significance: There are 630 million acres of forest lands in the United States, of which 462 million are capable of producing commercial timber crops. There are over 50 important forest types and 180 commercial tree species to be dealt with.

The wise and full use of this resource and its protection in an increasingly critical situation, enhanced by a shortage of trained manpower, increasing risk from sabotage, and growing importance, due to widespread introduction of war plants and military establishments in forested areas, are of obvious importance to the war effort.

General Plan: Research under this appropriation is conducted at 12 regional forest and range experiment stations. Much of this year's effort (over 80 percent) and most of the work ahead is on war problems. The remainder is on essential maintenance of long-time experiments to give common sense protection to investments already made in important studies.

Examples of Progress and Current Program: Shifts in programs to a wartime basis and some examples of recent accomplishments are as follows:

1. Requirements and supplies: An increasing amount of time of technicians in forest management research, well over half, has been devoted to the service-wide forest products requirements, production, and supplies survey. This project is described in the preceding general statement on forest research.

Familiarity with regional conditions including the occurrence and distribution of key species and forest types, local woods and mill practices, local transportation facilities, etc., have resulted in heavy demands on forest management personnel.

2. Forest protection: Research is aiding fire control organizations to meet an increasingly critical fire situation in key defense areas. This includes assistance in organizing for fire control in new areas and on an intensified scale; in the preparation, at the direct request of the army, of special fire control plans for important military and industrial establishments in forest areas; in studies of the use of fire in coastal defense; in the adaptation of fire danger meters (used as guides to fire control planning and suppression action) to cover additional forest types, together with locating, installing, and servicing the fire danger measurement stations needed for their operation; in the completion of standards for fuel type maps; and the improvements in fire dispatching, including the preparation of man-dispatching meters. Also, in the conduction of numerous spot studies related to fire problems accentuated by the war, for instance, how to fire-proof roadsides, railroads, and power lines; how the use of incendiary materials will modify detection and suppression requirements; and how tank trucks and more effective application of water and chemicals can be used to offset the effects of reduced manpower in initial attack.

3. Visibility: The "haze-cutter," which eliminates industrial haze and greatly lengthens the range of effective vision under specified circumstances, in addition to use in forest fire detection, was found to be a useful, specific contribution to the war effort in certain types of reconnaissance and photographic work by the military services. It also has possible use in anti-submarine warfare when smoke from forest fires is a factor. In addition, the work to date on visibility of small objects (smokes) has advanced principles and basic theory to a point where this will be useful in other problems of military reconnaissance and concealment; preliminary contacts show it can aid the military services materially in problems they now have under study. The possible use of these principles in camouflage and in other visibility problems as the detection and location of gun flashes is now being explored.

4. Camouflage: Research personnel has already given substantial aid to the military services on camouflage planting. This includes the furnishing of plant materials (seed, plants, and cuttings) and technical advice and guidance on planting and seeding problems at military establishments where partial concealment is important. The Forest Service (in cooperation with the Bureau of Plant Industry) has also undertaken, at the request of the Engineer Board, Fort Belvoir, two other jobs of a substantial character: (1) The preparation of a field handbook on the planting of trees and shrubs for use by army and naval engineers engaged on camouflage operations - this handbook is now in first draft; and (2) investigations on the possible use of growth hormones in securing better survival and more rapid early development of plants used in camouflage, and better health and vigor in existing plants left for concealment purposes on construction sites.

Preliminary studies give promise of developing simple dip, spray, and nutritional treatments that will help to meet camouflage planting needs where the difficult problems of poor site and out-of-season planting are frequently encountered. Familiarity with field planting problems plus good basic training in plant (tree) physiology make a limited number of investigators particularly useful in this field.

5. Naval stores: War demands for turpentine and rosin have exhausted available supplies, while labor and material shortages are making it difficult to obtain sufficient supplies currently. Research has developed and is assisting in pilot plant tests of a new method of chemical chipping which gives increased yields of as high as 65 percent with slash pine, and is attempting to crack the heretofore unsolved problem of similar stimulation of longleaf. Promising methods for longleaf, developed within the last six months, are now being tested intensively. If successful and found applicable on a commercial scale, this research contribution will help materially to meet the war demands for naval stores.

6. Timber cutting: Scaling method short cuts developed for the Rocky Mountain and Lake States regions, but widely applicable, will help to speed up woods operations without loss of accuracy and with lowered demands on skilled labor now difficult to obtain.

7. Other work completed this year includes:

The development of a partial cutting system applicable to black spruce; clear cutting formerly used.

The development of a special tool to facilitate killing weed trees with sodium arsenite.

Completion of better volume tables, including basic form class tables, for the Appalachians and South.

The completion of a nursery manual for Hardwoods, filling a long-felt need on the part of nurserymen, public and private. This is the first comprehensive and authoritative work in its field.

Striking progress in the use of direct seeding in place of planting in the Appalachian, Central States, and Northern Rocky Mountain regions.

Completion of case studies in the Pacific Northwest showing the way to strengthen county and state fire protection.

Isolation of maple trees genetically superior in the quantity and quality of sap yield, plus improved methods of propagating these strains under normal nursery conditions.

Only a very limited maintenance program will be continued on regular work. The major part of the effort will continue on war work in connection with forest products requirements and supplies, forest protection, camouflage activities, etc., as long as needed.

(h) RANGE INVESTIGATIONS

Appropriation Act, 1943	\$255,500
Budget estimate, 1944	<u>241,970</u>
Decrease (including decrease of \$800 travel funds returned to surplus)	<u>-13,530</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. Grazing management investigations	\$196,084:	\$189,000 :	\$176,270 :	\$-12,730 (1)
2. Artificial revegetation	57,309:	49,400 :	49,400 :	--
3. Range forage	16,350:	16,300 :	16,300 :	--
Covered into Treasury in accordance with Public Law 674	--:	800 :	-- :	-800
Unobligated balance	3,360:	-- :	-- :	--
Total estimate or appropriation	273,103:	255,500 :	241,970 :	-13,530

DECREASE

The decrease of \$13,530 in this item for 1944 consists of \$800 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$12,730 under the project "Grazing management investigations, which will be met by reduction in force, both permanent employees and temporary service, together with reduction in facilitating services; these curtailments will fall entirely on technical assistance in livestock production programs of war boards and other agencies administering range lands.

WORK UNDER THIS APPROPRIATION

Objective: To attain sustained maximum production of range forage and livestock, to help meet the shortage in meat, hides, and wool essential in the Nation's war effort; specifically to determine through research the most effective use of native range lands and to make such information directly available.

The Problem and its Significance: Demands for meat for the military, war workers, lend-lease, and civilian population exceed production possibilities by one-eighth or more. Mill consumption of apparel wool is more than double domestic production. Shearling production has had to be increased three times or more and a special hide conservation program instituted. The western and southern range territories furnish 80 percent of the Nation's wool and mohair, three-fourths of the live weight of sheep and lambs, and more than half of the live weight of cattle and calves. Range lands furnish

over 65 percent of the feed of cattle and calves in the range country, showing its vital role in maximum production of forage and livestock during the war.

Better management and revegetation are the keys to attaining maximum production. The range as a whole is fully stocked. Increasing numbers beyond range productive capacity would simply decrease production--a mistake of World War I. Stockmen and farmers are cooperating wholeheartedly and are anxious to obtain the information and guidance furnished by these investigations which will enable them to avoid past mistakes and increase their production.

General Plan: Range investigations funds and personnel are concentrated largely in support of the agricultural war program. This is true at all of the six western and one southeastern regional forest and range experiment stations and in Washington where range research work is under way. Cooperation is maintained with other Federal agencies, state agricultural experiment stations, farmers, and stockmen. The main war effort includes: (1) Participation in and assistance to state and county war boards in attaining maximum agricultural production; (2) in making available in practical form results of past research; (3) in conducting short-time essential studies to answer specific problems confronting war boards, stockmen, and farmers; and (4) in maintaining essential records on long-time studies, loss of which would hamper current and post-war application of research results.

Direct assistance is being given the Army and the Navy in camouflage and protective plantings on airfields and other military establishments.

Direct assistance is also being given the Emergency Rubber Production Project through assignment of trained technical personnel, consideration of special problems, and assistance in planning and organizing production programs.

Examples of Progress and Current Program: The following examples of specific work, accomplishments, and program under this appropriation indicate the extreme shift to support the war effort.

Grazing management investigations: This project concerns the production and management of the native range forage used by livestock in coordination with other agricultural production. A major part of the time of three-fourths of the professional men was spent assisting war boards, especially in connection with formulating plans for forage and livestock production and in efforts to attain such production, in planning for stepped-up production of wool and shearing pelts on request of WPB and OPA, and in making available information to aid in these programs. Simple, direct guides to improved practices and management were developed such as: (a) Folders on "Marketing More Cattle" for Idaho, Utah, and Nevada, outlining why such marketing was essential in the war program; (b) a folder on "Management of Annual Type Range in California" to secure a longer grazing season, heavier calves, and higher calf crops through a combination of conservative grazing and supplemental feeding. Comparable releases were developed in all other regions.

Direct assistance was given the Agricultural Adjustment Agency in determining how to check forage utilization for compliance of ranchers with its range conservation and sustained livestock production program and in training its farmer-fieldmen and other employees in making these checks.

Direct assistance was given the consideration and formulation of recommendations on farm and ranch labor as it relates to range livestock production.

Artificial revegetation investigations: This project is concerned with suitable species, methods, and sites for revegetation of western range lands. It has been devoted directly to war effort through assignment of personnel, formulation of plans, and furnishing planting materials to the Army and Navy for planting on airfields, ordnance depots, and other military establishments. At the request of the Camouflage Branch of the Engineering Board information on planting native vegetation under arid conditions is being prepared for army use.

Issuance of guides for range reseeding for stockmen and Federal and state agencies is facilitating increase in forage supplies for the war period. With the need for still further increase in forage for greater livestock production, short-time studies are being pushed energetically toward obtaining working answers immediately for additional species and methods to aid in further seeding. The artificial revegetation personnel have proven especially helpful in the formulation of plans and the accomplishment of plantings of guayule and Russian dandelion for the Emergency Rubber Production Program.

Range forage investigations: This work includes the collection, identification, and the building up of a usable source of information concerning the most effective use of the important plants growing on the range. An annotated range plant herbarium consisting of some 95,000 plant specimens is now on hand as a source of readily usable information in answering requests from farmers, stockmen, range administrators, and the military. This Division represented the Department in preparing the recently issued new edition of "Standardized Plant Names," a compendium of plant names in commerce. It has become the recipient of numerous inquiries from the Army, Navy, Department of Commerce, etc., on American economic plants and plant products or possible substitutes for exotic plants and plant products now scarce or unavailable, their location, abundance, and accessibility.

Work has been shifted to handle the following war jobs: (1) Analyzing and making available information concerning location and amounts of native rubber-bearing plants for emergency war supplies of rubber; cooperation with the Bureau of Plant Industry on material collected by Edison and his associates on many plants; and specific consideration of wild stands of such plants as guayule and rubber rabbitbrush; (2) technical advice and guidance to War Department concerning native plants suitable for camouflage.

(i) FOREST PRODUCTS INVESTIGATIONS

Appropriation Act, 1943	\$1,000,000
Proposed transfer in 1944 estimates to "Salaries and expenses, Library"	-8,211
Total available, 1943	991,789
Budget estimate, 1944	940,280
Decrease (including decrease of \$2,024 travel funds returned to surplus)	-51,509

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Timber Harvesting and conversion investigations	\$97,433	\$100,000	\$95,000	-\$5,000 (1)
2. Forest products statistics	12,135	13,535	12,855	-680 (1)
3. Pulp and paper investigations ...	131,059	128,050	121,650	-6,400 (1)
4. Timber mechanics and engineering investigations	249,248	264,780	251,540	-13,240 (1)
5. Seasoning and physical properties investigations	142,190	155,850	148,060	-7,790 (1)
6. Chemical composition and wood utilization investigations	143,042	137,200	130,340	-6,860 (1)
7. Wood preservation investigations	137,675	142,550	135,425	-7,125 (1)
8. Wood structure and growth investigations	46,655	47,800	45,410	-2,390 (1)
Covered into Treasury in accordance with Public Law 674	- -	2,024	- -	-2,024
Total estimate 1944 and comparable amounts 1943 and 1942	959,437	991,789	940,280	-51,509

DECREASE

The decrease of \$51,509 in this item for 1944 consists of \$2,024 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$49,485 in "Forest products investigations," distributed as indicated in the table above. This decrease will be met by a reduction in force, both permanent employees and temporary services, together with a reduction in facilitating services.

WORK UNDER THIS APPROPRIATION

Objective: To increase the usefulness and value of forest products; specifically, at present, to provide research and technical services needed in the selection, substitution, specification, efficient use, conversion, and faster production and delivery of forest products required for war needs.

The Problem and its Significance: With growing shortages of metals and many other raw materials, natural modified, and converted wood is being called upon more and more to help meet the mounting war needs. Besides the innumerable problems arising from the increased use of wood as a substitute material that require solution, better techniques must be developed for the proper and economical employment of wood for purposes where it has long been used.

For example, in boxing and crating where wood has so long been used, new and improved containers are needed that will be economical of material, conserve critical shipping space, and provide protection for the hundreds of items essential to the armed forces, for lend-lease food, and for other supplies and equipment.

More and more wood is being used in the aircraft program as a substitute for aluminum alloys in parts of combat planes and in the construction of gliders and training planes. Because of this, it is necessary to determine as quickly as possible the fundamental aircraft design data for natural, modified, and converted wood so urgently needed by the Army, Navy, and aircraft manufacturers.

The increased use of wood in ship, boat, and barge construction necessitates better methods of selection and the development of suitable techniques for rapid seasoning, bending or framing members, and the laminating of keels, frames, and other structural members for subchasers and other small naval craft, to permit the use of lumber for these members and reduce the demand for large timbers which are becoming increasingly difficult to obtain.

Wood is a source of many chemicals so essential for war needs. For example, work in the hydrogenation of wood and wood lignin is on the threshold of developing a new source of critical chemicals such as phenols, glycerine, glycols, methanol, resins, antiknock agents for gasoline, and others. Work needs to be done on the identification of chemicals derived, yields, costs, and optimum operating conditions.

The expanded use of lumber and timbers in place of steel for structures such as airplane hangars, munitions plants, and the like calls for technical information on the efficiency of various kinds of timber connectors for solid wood members; species, and grades of lumber and assembly methods for laminated wood members; and protection against fire from accidental causes and incendiary bombs with surface coatings and impregnated fire retardant salts.

General Plan: Practically all of the research and technical work under this appropriation is being conducted at the Forest Products Laboratory at Madison, Wisconsin. Over 95 percent of the appropriation for Forest Products Research is now devoted to war work. The small amount of "non-war" work under way covers those studies that are required to preserve the results of past research, the abandonment of which would be extremely uneconomical. Insofar as the war work is concerned, it is being conducted in close collaboration with the Army, Navy, War Production Board, Civil Aeronautics Administration, National Advisory Committee for Aeronautics, other war agencies, and manufacturers with war contracts.

Examples of Progress and Current Program:

Timber harvesting and conversion investigations: Progress under this project during the past year includes improvement in the grading and selection of veneer logs to meet the heavy demands of American and lend-lease requirements for aircraft veneers; the development of an improved hopper-feed wood-heating unit for small homes; and the production of a demonstration charcoal gas generator (gasogen) which has been mounted on a truck to determine the efficiency of charcoal gas as a motor fuel. A survey made at the request of the War Production Board showed that it is practical to replace 90 percent of the metals used in trailers with wood, and a publication was prepared primarily for farm implement manufacturers relating to the substitution of wood for metals in implement parts. Many small sawmill operators were extended technical consulting services to enable them by increased operating efficiency to increase their production of lumber. In the current program, work is continuing on the improvement of aircraft veneer log selection, the testing of the charcoal gas generator, and investigating the possibilities of substituting wood for critical metals in other fields.

Forest products statistics: The collection and compilation of factual information on the production, consumption, and distribution of lumber and other forest products has been a continuing cooperative project with the Bureau of the Census since 1902. The emphasis in this project has been shifted to tie in more closely with the objectives of the broader requirements and supply studies mainly to supply the information requested by the Army, Navy, WPB, OPA, and other war agencies on the requirements of forest products and the supplies available to meet these requirements, the productive capacity of plants including expansion possibilities, and transportation problems.

Pulp and paper investigations: A high-strength laminated paper plastic developed at the Laboratory appears to be a highly promising substitute for aluminum alloys in stressed aircraft members. It has been successfully moulded into a wing-tip section and ribs for a large airplane. At the request of the Navy Ordnance Department, a study was begun to determine its suitability for shell cases as a substitute for critical brass and steel. At the request of the Navy, shell plugs made of wood pulp were developed that satisfactorily met the tests to which they were subjected. At the request of the Quartermaster Corps, three types of helmet liners were subjected to extensive comparative tests including durability, acoustical properties, impact resistance, etc. Camouflage papers were developed for military use to supplement the fish nets now used for this purpose, and at the request of Army Ordnance many commercial greaseproof, vaporproof, and waterproof papers were tested to determine their suitability for wrapping ordnance equipment for shipment.

Currently intensive research is under way on the semichemical process of pulping which is especially adapted to hardwoods because of its high yield character and to the new alphacellulose process which gives a high yield of high purity, high viscosity pulp for explosives and other dissolved cellulose

products. Work is being continued on the improvement and adaptation of laminated paper plastics to aircraft, shell cases, and other war uses. The development of a fibre shell container is under way for overseas shipment of shells, and the substitution of pulp and paper products for other critical war materials is being studied.

Timber mechanics and engineering investigations: During the past year some of the urgently needed fundamental data on wood and plywood for airplanes and gliders have already been developed. A total of 36 reports has been prepared on the properties and use of plywood and wood in aircraft to furnish much needed information to aircraft and material manufacturers. A "restricted" ANC handbook, "Design of Wood in Aircraft Structure," was prepared for use in the design of aircraft of wood and plywood. Thirteen specifications were prepared for the Aeronautical Board covering various species of aircraft structural lumber, propeller lumber, etc. The packaging, loading, and shipping problems have been solved for hundreds of items vital to the armed forces such as machine guns, fire-control detectors, light and heavy artillery, maintenance equipment for aircraft squadrons, and for lend-lease food, including cheese, eggs, and canned milk. An Army Ordnance manual, "Instructions and Specifications for Packaging Ordnance General Supplies," was prepared. Educational courses on container construction, packaging, and loading, initiated at the request of the Army and Navy, are being given regularly to representatives of the armed forces and manufacturers.

The current program embraces the development of the additional information so essential to the design of plywood aircraft including the properties of plywood of various species, laminations, ply thicknesses, and grain direction, the strength of plywood as a plate and as a skin membrane, and plywood fatigue. Design data on other wood materials suitable for metal substitution such as resin impregnated wood, resin impregnated and compressed wood, wood plastics, and high-strength laminated paper plastics are also being obtained. Work is continuing on solving the mounting problems of packaging, shipping, and loading of equipment and materials for the Army, Navy, Lend-Lease, and others.

Seasoning and physical properties investigations: Since seasoning is one of the principal bottlenecks for the quick deliveries of wood products essential for war purposes, much of the work under this project last year was devoted to improving old methods and developing new methods for the more rapid seasoning of these products. The time for kiln drying black walnut gunstock blanks was reduced by one-quarter and for shoe lasts by one-third. A kiln drying schedule was developed for black cherry gunstock blanks, and end coatings suitable for use in seasoning black walnut and black cherry gunstock blanks were perfected. An electrostatic oscillator was designed and built for the rapid curing and gluing of resin impregnated and compressed wood, laminated paper plastics, plywood, and other wood products, and means of artificially hardening birch were developed to supplement the rapidly diminishing dogwood for shuttles used in weaving wartime textiles.

At present a means of fabricating laminated keels, frames, and other structural members for subchasers, other small naval craft and barges is under development; work is being pushed on the seasoning of other wood

products essential to the war effort; and studies on the electrostatic curing and gluing of resin impregnated and compressed wood and laminated paper plastics for aircraft parts are being continued.

Chemical composition and wood utilization: The development work on resin impregnated and compressed wood and resin impregnated wood has resulted in the successful employment of these materials for various war uses: The former for ground test and airplane flight propellers, airplane tail wheels, pilot seats, and shipdecking, and the latter for electrical control housing for torpedo boats and semistructural airplane skin surfaces. Storage battery boxes for aircraft naval vessels, etc., have been developed from hydrolyzed wood plastic to replace hard rubber boxes, and hydrolyzed wood laminating sheets have been evolved which hold promise for use for moderately stressed airplane and glider parts. A dense charcoal has been developed with properties comparable to those of standard gas-mask charcoal.

The results of the work on the hydrogenation of wood and wood lignin suggest that many critical war chemicals such as phenols, glycerine, methanol, anti-knock agents for gasoline, resin, and others can be produced by this means, and studies are now under way on the identification of the chemicals, yields, production methods, and costs. Work is also being continued on the development and adaptability to war uses of resin impregnated and compressed wood and resin impregnated wood, hydrolyzed wood plastic and hydrolyzed wood laminating sheets.

Wood preservation investigations (includes investigations on veneer, plywood and gluing): Accomplishments under this project last year include the preparation for the Aeronautical Board of a "restricted" publication, "Wood Aircraft Fabrication Manual," which covers the preparation of materials and the assembling operations essential to producing modern wood airplanes and parts; a revision of the "Manual for the Inspection of Aircraft Wood and Glue for the U. S. Navy" for the Bureau of Aeronautics; the preparation at the request of the Army and Navy of two specifications, one covering fire-retarding chemicals and the other covering methods of impregnating these chemicals in wood for the protection of wood in buildings and structures against fire; and the preparation at the request of the War Production Board of emergency alternate Federal specifications for wood-preserving salts containing copper and chromium salts and dinitrophenol to conserve the dwindling supply of these critical materials. A fire-retarding paint was developed that appears very promising for retarding the spread of fire from incendiary bombs.

In the current program, glue and plywood studies are continuing to be emphasized because of the vital need of this information for aircraft and boat construction and for other war uses. Problems are being solved on gluing technic by such methods as nail gluing, bag molding, and pressing, as well as in glue composition and testing, the evaluation of glues and the development of new glued products particularly curved and complicated plywood and laminated parts for aircraft, boats, etc. Also under way are studies to improve the details of veneer cutting to increase the supply of veneer needed for aircraft and other war needs. Continuing also is the work on the

evaluation and improvement of finishes and finishing methods for plywood, airplanes, and gliders. An educational course for inspectors of wood aircraft, initiated at the request of the Army Air Forces, is being given at frequent intervals to representatives of the Army Air Forces and manufacturers.

Wood structure and growth conditions: An investigation of the effect of growth conditions on wood quality has shown the type of tree best suited for gunstock walnut, and a study of black cherry has revealed that it is suitable for gunstocks, thus practically doubling the supply of gunstock timber. Short-cut methods for determining defects in aircraft veneer and lumber were developed to aid inspectors of these materials. Douglas-fir bark was shown to be a promising source of granulated cork for use in engine gaskets, bottle-cap liners, and the like.

The current program includes further work on the production of cork from Douglas-fir bark and the location of economically available sources of bark, the evaluation of the effect of obscure defects on the strength of aircraft veneer and plywood, and the more definite identification of native species and species imported from South America and other sources for use in the war effort.

(j) FOREST SURVEY

Appropriation Act, 1943	\$202,629
Proposed transfer in 1944 estimates to "Salaries and expenses, Bureau of Agricultural Economics, economic investigations"	-2,337
Total available, 1943	200,292
Budget estimate, 1944	189,400
Decrease (including decrease of \$929 travel funds returned to surplus)	<u>-10,892</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. Forest Survey -- present and future requirements	\$246,151:	\$199,363 :	\$189,400 :	\$-9,963 (1)
Covered into Treasury in accordance with Public Law 674	- -:	929 :	- - :	-929
Unobligated balance	4,141:	- - :	- - :	- -
Total estimate 1944 and comparable amounts 1943 and 1942	250,292:	200,292 :	189,400 :	-10,892

INCREASES OR DECREASES

The decrease of \$10,892 in this item for 1944 consists of \$929 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$9,963 in "Forest survey investigations," which will be met by a reduction in force, both permanent employees and temporary service, together with a reduction in facilitating services.

WORK UNDER THIS APPROPRIATION

Objective: To furnish, for both peacetime and wartime needs, information on the extent and condition of all forest land and our requirements for forest products. This requires field study to determine for both public and private forest land the extent, quantity, quality, and kinds of timber, the condition of cutover land; and the rate of timber depletion from all causes; current and potential growth; and present and potential future requirements for forest products. Analysis and interpretation of these findings is basic to a proper understanding of the forest situation and to the formulation of principles, policies, and plans for permanent forest land management and all that goes with it in the way of stable communities and regular jobs for workers.

The Problem and its Significance: The problem is to make an inventory by field examination and sampling of all forest land in the United States -- three-fifths of a billion acres -- and to determine by systematic search and analysis present and future trends of our requirements for forest products.

Raw material requirements for national defense and civilian needs is currently focusing increasing attention on the supply of forest products because of serious shortages of other materials used in place of wood and on account of mounting demand for lumber in its normal markets. The Forest Survey answers the questions of how much, where, and what kinds of timber are available, to what extent is the forest resource being damaged by overcutting, and is the supply adequate to meet needs? This project provides a basis for plans to assure a permanent, adequate supply of forest products.

General Plan: This project normally involves a survey of all forest land in the United States, estimated at 630,000,000 acres, to determine present stand, rate of growth and drain on timber supply, and searching analysis to determine present and future trends of our requirements for forest products.

Regular work is being adjusted to meet requests of war agencies, such as WPB, for information on the amount, kinds, and quality of timber in the vicinity of war production plants using forest products in all forms; output, and capacity of primary wood-using industries; or facts to set up production goals for timber along with other soil crops. In addition, the usual numerous requests for Forest Survey information from state and Federal bureaus, planning boards, railroads, and industrial and farm timberland owners are met.

Examples of Progress and Current Program: To date 303 million acres of forest land have been inventoried, leaving 327 million acres to cover. About five-sixths of the area studied has been reported on in 204 reports and forest type maps for all or parts of 14 states, principally in the South, Appalachian, Lake States, Inland Empire, Pacific Coast, and California regions.

On account of wartime conditions and reduced appropriations, systematic coverage of new areas has been held to a minimum. Primary effort has been focused on preparing special reports on forest products, requested by WPB, OPA, Army, and Navy. In addition, compiling and analyzing information for the areas inventoried, but not yet reported on, and collecting forest depletion information for the 300 million acres inventoried, for use in keeping the volume of standing timber up-to-date, have been carried forward as was possible.

Especially timely was the completion and compilation of the results of a periodic canvass of the amount of lumber used by some 25,000 manufacturers. It covered all items, including boxes and other containers, especially essential in war. Other forest products requirements reports released covered naval stores, and veneer and plywood.

Eighteen reports were completed for parts of several regions including forest type maps for Virginia and the Lake States. A bulletin on the forest resources of the Upper Peninsula of Michigan covers most of the remaining high quality hardwoods in the fast-waning stands of timber in the Lake States.

Numerous special reports were supplied war agencies on request for data on the supply and requirements of critical species including Sitka spruce, birch, sweetgum, yellowpoplar, etc.

Work is continuing to supply information to meet war needs on forest resources anywhere in the United States. This already has required spot cruises of critical species, supplementary studies of timber quality to meet war production requirements, and continuous field canvasses to obtain figures on lumber and timber products production. No new areas will be inventoried this year under standard survey procedure.

(k) FOREST ECONOMICS INVESTIGATIONS

Appropriation Act, 1943	\$119,000
Budget estimate, 1944	<u>112,580</u>
Decrease (including decrease of \$500 travel funds returned to surplus)	<u>-6,420</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. New public domain investigations	\$28,378	\$15,250	\$13,250	\$-2,000 (1)
2. Financial aspects of forestry....	63,143	58,250	56,330	-1,920 (1)
3. Stumpage, log, and lumber prices	14,250	14,250	14,250	- -
4. Range economics	14,743	13,350	11,350	-2,000 (1)
5. Economic-social benefits of forestry	17,394	17,400	17,400	- -
Covered into Treasury in accordance with Public Law 674	- -	500	- -	-500
Unobligated balance	3,582	- -	- -	- -
Total estimate or appropriation	141,490	119,000	112,580	-6,420

DECREASES

The decrease of \$6,420 in this item for 1944 consists of a \$500 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$5,920 in "Forest economics investigations," to be distributed by Work Projects as indicated in the above table. This decrease will be met largely by reduction in permanent employees, it being impossible to effect further reduction in facilitating services.

WORK UNDER THIS APPROPRIATION

Objective: To furnish information needed in solving the problems associated with the transition from unregulated forest exploitation to permanently productive forests, in planning for stable forest industries, in formulating sound programs of public acquisition of forest land, in the determination of economically and socially practicable forest land-use principles, and in meeting demands for information and other special services arising out of defense activities. This usual peacetime objective is now temporarily superseded by using the information and skills developed by this project to contribute to war work.

The Problem and its Significance: There is urgent and continuing demand for information, consultation, special reports, hot-spot investigations, and other services that men in this project are especially equipped to handle

with maximum efficiency. Every war agency whose work relates in any way to the production or distribution of forest products has sought aid from Forest Service economists at some time, and contacts with a few of these agencies demand almost continuous staff participation.

Under peacetime conditions the logical scope of studies in forest economics is virtually co-extensive with the entire field of forestry. Almost every forestry problem has important economic aspects, and its solution is dependent in part on economic considerations. Information and analysis are needed that can be furnished only by trained forest economists.

The urgent economic problems which these studies are designed to answer include the following: What constitutes a sound economic foundation for sustained-yield management of such lands? Where and under what conditions and to what extent can improved forestry practices be made financially feasible? How utilize and interpret data on costs and returns as a guide to more effective land use and forest management practices? Under what circumstances is public ownership more suitable and economical than private ownership of forest lands?

Other problems of highest priority that require economic analysis, frequently in correlation with other forest research, are the problems resulting from wholesale abandonment of cutover lands, formulation of practical methods of placing the limited reserves of virgin timber on a sustained-yield basis, collection of current data on prices of forest products, the economic aspects of cooperative associations for the management of farm woodlands and the market of products therefrom, the social and economic effects of alternative patterns of range privilege distribution on national forest lands, the rehabilitation of resources and people in submerged forest communities, and - of paramount immediate importance - furnishing data and plans and otherwise participating in many aspects of the defense effort.

General Plan: Forest economics investigations are in process at eight forest experiment stations, and by a small group of technicians in the Washington office. Cooperative working relationships are maintained with a number of state experiment stations, trade associations, the Bureau of the Census, and other Federal bureaus, including defense agencies.

Examples of Progress and Current Program:

New public domain investigations: War demands took first precedence, with consequent decline in accomplishments along lines of regular work. War work included field participation in census of lumber production, and in special surveys to obtain supplies in requirements data; a report was prepared on relationship of forest resources to war industries in California, and an investigation was started of the financial basis for support of adequate wartime forest fire protection in strategic high-risk areas. Nearly 50 percent of all work during fiscal year 1942 represented war activities.

The regular objective of the project is to cope with the problems resulting from wholesale abandonment, through tax delinquency, of cutover forest land by private owners. The tax reversion trend has declined in some regions recently, but in others is continuing unabated.

Particularly worthy of mention, along lines of regular work, is the increased cooperation which this project has enabled the experiment stations to give to Federal, state, and local agencies working on land-use problems - work that has high value for post-war planning.

At the California Station a study was completed in Modoc County of the social and economic effects of alternative timber management plans for achieving maximum benefits from the utilization of national forest timber. Also, the final report on the northern Sierra Nevada study was completed which will provide a needed basis of information for instituting improved land-use practices in this area. In cooperation with the University of California, a bulletin was published which describes the land-use and timber-cutting practices that will maximize income from second-growth pine forests in the western Sierra Nevada region.

At the Pacific Northwest Station, extensive cooperation has been continued with regional, state, and local agencies dealing with problems of land classification, land use, and the handling of tax-delinquent forest lands. Work on this project at the Pacific Northwest Station is being dropped, because of reduction in funds, although the ultimate objectives of the project have not yet been attained.

At the Southern Station, current data were obtained for the tax-index series, and coverage was extended to Louisiana and two additional counties of Alabama. This project will be continued on a maintenance basis because forest tax data are of growing interest to various states throughout the South. Assistance was extended to Oklahoma in connection with a study of current tax-delinquency conditions and trends, and the land-use committee of that state was aided in drafting recommendations for remedial legislation.

Financial aspects of forestry investigations: Personnel assigned to this project have been in much demand for consultive service to war agencies. Because of need for increased production, study is under way to ascertain the minimum diameter of trees to cut in relation to most efficient use of labor and equipment in logging and milling in the second-growth areas. Other war work has included investigation of demand-price-supply relationships, to aid WPB and OPA in maintaining uninterrupted flows of forest products for war purposes; studying problems of transportation from woods to mills and preparing recommendations for greater economy and efficiency in use of available transportation facilities; field participation in the census of lumber production, and special surveys of forest industries and critical supply situations; preparation of leaflet on wartime use of fuel wood; and a study of shortages of boxes and barrels in the Lake States, with recommendations for relieving the situation.

Regular work on this project has two phases. The first is a study of the financial aspects of commercially owned forests to determine the extent to which improved forestry practices are economically feasible and may contribute to community and industrial stabilization and welfare. Work has been centered largely at the Southern and Pacific Northwest Forest Experiment Stations but is now suspended at the latter station because of reduction in funds.

At the Southern Station, where work centers around the Crossett Experimental Forest, investigations were continued on a minimum basis on: (1) Relative costs and returns from harvesting trees for sawlogs, pulpwood, posts, and other forest products, singly or in combination; (2) the size and age at which trees become financially mature for each of these products; (3) effects of stocking, cutting cycles, and intensity of selective cutting upon growth rate, yields, costs of logging, and net returns; (4) desirable logging methods; (5) costs and returns from various pruning, thinning, and improvement-cutting practices; (6) effect of road type and spacing upon costs of truck logging; and (7) effect of controlled burning upon reproduction, growth, yields, and costs and returns. Actual industrial experience shows that light cuts at frequent intervals yield attractive returns, improve the growing stock both in quantity and quality, increase volume growth, and decrease logging costs, in comparison with clear-cutting methods. Because of its value as a monitor for the industry, the importance of continuity in its records, and contract obligations, this Crossett project should be continued without interruption.

The second phase of this project covers the economic problems of farm woodlands. Emphasis is placed on how to make farm woods contribute more to farmers' incomes and to stabilization of local woods industries. Work is conducted by the Allegheny, Central, Southern, and Lake States Experiment Stations.

A project in Otsego County, New York, aims to work out problems involved in the establishment and development of forest cooperatives. This farm-forest cooperative association has grown to over 900 members. Control of cutting has been established on all members' lands, and the woodlands are becoming an increasingly valuable part of the farm enterprise. Almost all of the current output is going directly into war channels. Because the association is still in the developmental stage, the research phases will be continued. Data are being obtained that are potentially of Nation-wide significance for the future of farm-forestry cooperatives.

In cooperation with the BAE a study was made last year of various methods of managing farm woodlands as an integral part of the farm enterprise in the New York dairy region. Another study, of stand realization values, shows that cutting to an 18-inch diameter limit will yield 87 percent of the stumpage value of the entire stand, and yet retain a growing stock constituting 60 percent of trees over 14-inch diameter.

At the Central States Station work continued in cooperation with the several state agricultural experiment stations on the analysis of the present and

future place of farm woodlands in the agricultural economy of the Corn Belt. All these will be of much value to all persons concerned with management of farm woods.

At the Lakes States Station a Department of Agriculture bulletin, "Farm Forestry in the Lake States," was given final revision and is now in press; it will offer a five-point program for increasing income from farm woodlands. Aid was given several farm-forest cooperative associations, two in cooperation with the Farm Security Administration. A farmers' bulletin, "Farm Buildings from Home-Grown Timber," was completed. Several small bulletins on the cutting, treatment, use, and marketing of farm-grown timber were prepared, in cooperation with the state agricultural experiment stations.

At the Southern Station studies were made of farm forests in Arkansas and Louisiana and reports published, in cooperation with BAE, SCS, and the respective state agricultural experiment stations. These contain analyses of the present and potential contributions of typical small farm woodlands to the general farm economy in the area studied, describe the practices required for good forest management, and indicate the probable yields, costs and returns, and size of farm woodlot that can be operated per family.

Stumpage, log, and lumber price investigations: Work under this heading involves collecting and analyzing data on stumpage, log, and lumber prices, and on production, distribution, and consumption of lumber by geographic areas; and analyzing current data on imports and exports of forest products. Distribution of statistical releases is made quarterly and annually, under normal conditions.

No basic redirection of work was necessary to convert this project to full wartime basis, because the entire effort has been devoted to providing information currently and continually in demand by war agencies. Rather, there has been expansion and intensification in some directions, and special statistical compilations are being made frequently on requests from war agencies. For example, Forest Service participation in the annual canvass of lumber production, made in cooperation with the Bureau of the Census, was expanded this year to cover the entire United States; a preliminary estimate of 1941 lumber production was made four months in advance of the usual date of release, at the request of WPB; and the survey of lumber consumption and distribution, ordinarily conducted only biennially, was made for 1941 in response to a similar request.

Range economics investigations: War work: Station representative serves on the Agricultural Production Goals Committee for the Intermountain region. Technical assistance is being given to range administrators. Special jobs consist of analyzing and interpreting available data to assist in meeting livestock production goals by reducing losses and increasing market weights, and without causing further deterioration of range lands. Information is being made available to stockmen for immediate use concerning the relative efficiency of various sizes and types of range livestock operations and methods of coordinating and adjusting the use of open range, range property, and feed crops.

The long-run peacetime objective of this project is investigation of the relation of Federal ranges to the agricultural economy, as a basis for the optimum distribution of national forest grazing privileges to different sizes and types of livestock operations. Thus far all work has been within the Intermountain region, which embraces an area of 145 million acres of range land.

The livestock industry in this region supports a substantial proportion of the local population. Large numbers of sheep and cattle are supplied to local and Nation-wide markets for wool and meat. The industry depends wholly on adequate and sustained forage resources for its healthy existence and growth, requiring wise use of both public and private lands. The economic basis for planning such use calls for comprehensive and continuing research. Economic aspects relative to overstocking of ranges, deterioration of forage crops, distribution of and charges for use privileges on public range lands, extent of such use, conflicting land uses, and range land taxation, valuation, and financing are involved.

Economic-social benefits of forestry investigations: This project was initiated to furnish the information needed in preparing plans for the rehabilitation of the forest resources in the Pennsylvania Anthracite region. One and one-half million people, living on an area of four million acres, basically dependent on a single declining industry - the mining of hard coal - present a serious social and economic problem that has been alleviated only partially and temporarily by war developments. Even today there are several thousand idle men in the region. The end of the war will bring basic maladjustments into even sharper focus. Idle men and idle land side by side force attention to the possibilities of relieving both by restoring the one great replaceable natural resource. - the forests.

In view of above considerations, the plan of work has been modified in order to (1) make it of greatest possible wartime value, and (2) emphasize its post-war significance. The report to the President of the Federal Anthracite Commission included the specific recommendation that the forestry investigations in the Anthracite region be intensified and expedited.

War contributions have included: Furnishing forest cover, ownership, and land-use maps to civil and military personnel charged with protection of strategic facilities; participation in census of lumber production and special surveys of critical species; aiding Office of Production Management and Wyoming Valley Chamber of Commerce in selecting sites for wood-using and other war industries; making special survey of impact of wartime cutting on forest resources of eastern Pennsylvania.

During the past year the inventory phase of the job was completed for five additional counties, Carbon, Columbia, Susquehanna, Wayne, and Wyoming; it is expected that inventorying of the remaining counties of the region will be completed in fiscal year 1943. Weight-volume conversion tables were prepared for all important timber species. Form class volume tables were completed for all species; these embody an important innovation, i.e., the

number of separate tables required has been reduced to one-seventh by the use of a specially devised triple logarithmic chart that reads directly in volumes. A report on tax delinquency of forest land in the region was released; this led to the formulation of a plan for acquiring county forests that is being sponsored by officials of Luzerne County. Forest condition maps were developed for all inventoried counties. Preliminary explorations were made of the use of aerial photographs in timber cruising and in preparation of forest condition maps and cover maps for fire protection and military use; results indicate that the speed and accuracy of the line plot inventory method can be greatly increased by utilizing aerial photographs in conjunction with ground work. Office computations were completed and a report was drafted on the forest situation of Luzerne County, including the outline of a recommended program for achieving forest rehabilitation; this is now in process of final editing.

(1) FOREST INFLUENCES INVESTIGATIONS

Appropriation Act, 1943	\$133,000
Budget estimate, 1944	<u>125,970</u>
Decrease (including decrease of \$400 travel funds returned to surplus)	<u>-7,030</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. Influence of forests on streamflow investigations	\$73,865:	\$83,500 :	\$83,500 :	- -
2. Investigations of utilization of water by trees	20,323:	23,000 :	16,370 :	-\$6,630 (1)
3. Investigations of stabilizing soils:	27,012:	15,000 :	15,000 :	- -
4. Investigations of the effect of forest cover on climate	14,081:	11,100 :	11,100 :	- -
Covered into Treasury in accordance with Public Law 674	- -:	400 :	- - :	-400
Unobligated balance	1,539:	- - :	- - :	- -
Total estimate or appropriation	136,820:	133,000 :	125,970 :	-7,030

DECREASE

The decrease of \$7,030 in this item for 1944 consists of \$400 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$6,630 under the project "Investigations of utilization of water by trees," which will be met by reduction of force and a reduction in facilitating services.

WORK UNDER THIS APPROPRIATION

Objective: To increase the effectiveness of natural plant cover in its relation to water, soil, and climate. Specifically, to measure the influence of natural vegetation on water supplies, stream behavior, floods, soil productivity, and climate; to determine the extent that beneficial influences can be augmented or modified in man's behalf; and to develop practical methods of using, maintaining or restoring vegetation while at the same time obtaining benefits through its use.

The Problem and its Significance: Practically every watershed of the Nation contains some of the 630,000,000 acres of forest and 585,000,000 acres of nonforest range land. Floods, irregular streamflow, water shortages, muddy streams and choked rivers and harbors bear testimony that few of the lands in these watersheds are not suffering from abuse. Flash floods, extremely low summer and autumn streamflow, and diminished underground water supplies are associated with depleted condition of vegetation of many watersheds. Reservoirs for municipal water supply, irrigation, flood control, and power have lost an alarming amount of their effective capacity due to siltation largely resulting from removal or depletion of vegetation of the watersheds. Civilization and settlement dependent upon these costly developments are threatened by an accelerated process largely man caused. The destructive forests set in motion by the deterioration of the land and its vegetation can be reversed and prevented by rehabilitation and maintenance of a vegetable cover, and the life of mankind thereby extended.

In the past, policies as to the use, management and ownership of forest and range lands have been based on too few facts regarding potentialities and limitations of the lands. Some of the most important facts of land use and management are those related to the water cycle. Capacity to use beneficially or to deliver water only as wanted or needed are important criteria in evaluating land and formulating programs for its best use.

As the public acquires land, it assumes responsibility for management in the public interest. As many of the lands are in deplorable condition when acquired, restorative practices are essential to build up the water and soil resource.

General Plan: Investigations in this field are conducted as part of the activities of six regional forest experiment stations. They have been planned in accordance with a national plan which has twice been presented to the Congress. Only a few of the most important national and regional problems have been attacked so far, leaving to the future the initiation of the work on other major and equally important problems.

During the past year and currently, this program has been radically modified to meet war conditions. The most essential of the long-time work has been placed on a maintenance basis to conserve the large past investment in work and qualities, and other activities have been reduced to barest necessities, and modified so they can yield the utmost in meeting emergencies and in helping in many phases of the war activity.

Examples of Progress and Current Program:

Influence of forests on streamflow: The broad objective is to determine how forests and other wild land vegetation affect water behavior and water supplies. The results are used in establishing management procedures, especially those on national forests watershed lands and in evaluating departmental programs involving public acquisition, land-use readjustment, and land management. The results of this research are particularly useful in water programs related to war activities, and promise even greater utility in post-war activities.

One result from this work is that in southern California a "flood warning service" to local communities has been developed to prevent flood damage following forest fire. This warning service is of outstanding value now in view of the many different kinds of war industrial plants in southern California at the present time, and the need for maintaining "life-lines" of communication, transportation, oil, water, and power.

Forecasts of stream behavior are of great importance to hydro-electric plants. Such forecasts permit operation of such plants at highest efficiency whether using run-of-the-river flow, or reservoir storage. Data obtained from investigations in the Appalachian Mountain region have pointed to the possibility of accurate predictions which are now being made currently for the Tennessee Valley Authority and privately operated power producing plants in the region. Practically all the Influences Research of the Appalachian Station is now directed to pushing forward this activity because of its tremendous value in maximum hydro-electric power output for war work.

Utilization of water by trees: The purpose of this work is to determine the amount of water used by forest and other wild land vegetation. The quantity of water which trees may intercept, to be evaporated or to be used up in life processes, may be a large quantity and an important factor in the availability of water supplies. There is a growing recognition by engineers and others of the need for data which would help interpret the part that natural vegetation plays in the availability of water supplies, both surface and underground. The foundations are being laid of knowledge of how the density, character or quality of the vegetation may be changed to obtain maximum water delivery and at the same time protect the soil and prevent excessive runoff.

Changed emphasis in the light of the war has reduced the magnitude and scope of these activities. Work is being placed on a maintenance basis, only retaining those continuing phases which give maximum promise of outstanding results on a minimum basis.

Stabilization of soils: The primary objective of this project is to discover means of stabilizing soil in forest and range land. In shifting the emphasis in this activity, stress has been placed on making available information through analysis of past work and on studies of primary value in the post-war program.

Results of past work have found practical application in a number of regions where advice and guidance has been and is currently being made available for use in army camps and maneuver areas. A method of applying a mulch of forest and other litter on eroding road banks and slopes has been successfully used in rolling terrain. Help has been provided on special problems created by army activities. Current research has been modified to provide answers to related problems.

A significant by-product of this research is information now extensively used in camouflaging raw soils. Information has also been made available to the military on the west coast on the adaptability of native plants for such use.

Only the most essential long-time studies under this activity are being continued. Special attention is placed on work to meet requests from essential war agencies and industries, and to meet conditions attributable to war activities.

Effect of forests on climate: The investigations of the effect of forests on climate are yielding by-products of current and immediate application and use. The weather information collected at branch stations is supplied regularly to the Weather Bureau. This information in mountainous terrain where regular observations are not otherwise currently available, supplements the existing network stations. It is understood that these are being used in preparing special forecasts of forest fire hazards for areas where sabotage or incendiary bombing is possible, and particularly of possible changes in storm and wind conditions which affect aviation. These are in special demand in areas where rapidly changing mountain weather conditions create special hazards to aviation. A number of local stations, which under war conditions would have been discontinued, have consequently been maintained.

(m) FOREST FIRE COOPERATION

Appropriation Act, 1943	\$4,000,000
Proposed transfers in 1944 estimates to	
"Salaries and expenses, Bureau of	
Agricultural Economics, economic	
investigations"	-7,790
Total available, 1943	3,992,210
Budget estimate, 1944	3,989,723
Decrease (travel funds returned to sur-	
plus)	-2,487

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Cooperation with states in forest fire prevention and suppression	\$2,364,727	\$3,944,903	\$3,944,903	--
2. Taxation inquiry and insurance	45,742	44,820	44,820	--
Covered into Treasury in accordance with Public Law 674	--	2,487	--	-\$2,487
Unobligated balance	8,741	--	--	--
Total estimate 1944 and comparable amounts 1943 and 1942	2,417,210	3,992,210	3,989,723	-2,487

WORK UNDER THIS APPROPRIATION

Objective: To extend Federal aid in continuing and increasing the pre-war standards of essential fire control on the 282,000,000 acres of state and private forest and watershed lands and to cooperate in the extension of forest protection to at least part of the remaining 144,000,000 acres of non-Federal lands needing, but not now receiving, organized protection. Fire control objectives are (1) to prevent fires from starting and (2) to organize for the fire seasons to accomplish quick detection and suppression of all fires which do occur. This is necessary so that fire loss and funds expended may be held down to a reasonably acceptable basis. Also to aid states and local governments in the achievement of more equitable and appropriate taxation of forest lands and to devise plans for the insurance of private forests.

The Problem and its Significance: Over three-fourths of the Nation's forest lands are in state and private ownership. These lands are providing at least 90% of the huge volume of wood materials now going into war supplies. Safeguarding this supply of raw material is therefore of fundamental importance.

The first problem is to hold that pre-war success which has already been attained in reducing fire losses, the second is to increase the effectiveness of this established protection, and the third is to furnish federal stimulus to the states in extending fire control to additional private forest lands which are in need of protection.

The war has greatly complicated and increased the cost of fire control. Key fire fighters have joined the armed forces or left for more remunerative jobs in war and industrial plants. Costs of all fire fighting tools and equipment have mounted, plus all the difficulties of priority purchase. South Carolina, for example, received a state appropriation increase of \$12,000, all of which had to be used for nominal salary increases in an effort to retain key forest guards. This is typical of most states. State protection personnel turnovers of 50 percent are not uncommon.

The greatest single loss to state fire suppression efforts is that of the CCC. In 1935 there were 633 CCC camps assisting in the construction of forest fire improvements and furnishing a backlog of approximately 126,000 trained fire fighters on state and private areas. This number of camps was gradually reduced to 271 in 1941 and then to 65 in 1942. Now all are gone. In order to hold emergency fire suppression charges to a minimum it now becomes necessary for the states to hire and train special suppression crews so that trained fire fighters will be readily available. Unless some such plan is followed to at least partially replace the CCC and other trained manpower formerly available, catastrophic losses are almost certain to occur. This appropriation is intended partly to help the states in meeting these added costs in order to maintain pre-war levels of fire control.

The Clarke-McNary Law, enacted in 1926, has been very effective. States with limited state appropriations are able to make a much better showing in their fire control activities because of the Federal allotment for their use. In other states the grant-in-aid allotment makes it possible to intensify the protection work and make a greater reduction in losses from forest fires. Federal leadership stimulates state legislative action and gives stability to trained protection organizations. The fire protection job is a public responsibility and public administration, involving police powers of the state, alone can promise success with economy. The appropriations made by the states and the contributions by private land owners have made steady and substantial increase but the Federal Government has not kept pace in its participation. For the fiscal year 1943 state and private funds are available to the amount of \$10,303,158, the Federal appropriation being \$4,000,000. (See table attached.) The language of the Clarke-McNary Law permits 50-50 Federal sharing in expenditures.

During calendar year 1941 there was reported a total of 80,994 fires on the 282,074,210 acres of protected state and private forest lands. These fires burned 3,137,845 acres and caused over \$8,000,000 damage. On the 143,741,186

acres which have not yet been placed under organized protection, there were 108,706 fires. 1.12 percent of the protected area was burned over - but forest fires ranged over 15.88 percent of the unprotected area. The actual value of organized protection is shown by the fact that although 43 percent of all the fires occurred on protected lands, only 12 percent of the acreage burned was on protected land and, similarly, only 22% of the total damage occurred on lands under protection. Organized protection held the average area per fire to 38.7 acres on protected lands, while the average burned on lands without protection was 210 acres.

The tax problem is generally recognized as of major importance in its effect upon the management of private forest lands. In many localities present methods of taxation discourage or prevent the practice of forestry on these lands.

The risk of loss from fire has been reduced in many localities by prevention and suppression efforts to insurable proportions. Nevertheless, forest insurance at reasonable rates is not available, and this lack is a serious obstacle to private investment in forestry.

General Plan: The cooperative fire protection program is administered on the ground by the states under agreements and plans developed jointly by Federal and state officers. Each state annually presents a budget showing state and other funds set up for the work. Adequate protection involves organizing men, equipment, and materials for the prevention and suppression of forest fires. It requires educational work and insofar as practicable the reduction or elimination of abnormal fire hazards; the quick detection of fires through the operation of lookout towers and the employment of fire patrolmen; the suppression of fires (involving stand-by crews, the development and use of mechanized equipment, and at times the employment of very large numbers of men), and the establishment of necessary improvements for communication and transportation. Adequate inspection is made by the United States Forest Service to see that high standards of organization and compliance are maintained. Grants to the individual states are made on a reimbursement basis, that is, expenditure must be made by the state before any reimbursement is granted. Every dollar given in grant by the Federal Government must be matched by the state.

The taxation and insurance activities have both been carried through initial stages of developing fundamental principles and methods. Taxation studies are now directed to application of these principles and to new angles of the problem. Most field investigations are made at the request of state officials, and all studies are closely integrated with other forest economics research. Forest insurance activities, in default of action by private insurance companies, are now directed chiefly to determining the feasibility of providing such insurance through existing governmental agencies.

Examples of Progress and Current Program:

Payments to states for cooperative forest fire prevention and suppression: Under the Forest Fire Cooperation programs in 42 states and Hawaii in

fiscal year 1942 approximately 282,000,000 acres of state and privately owned forest lands were protected from forest fires. Organized fire protection is still lacking on approximately 144,000,000 acres. During the 17 years since the Clarke-McNary Law program was initiated the average annual gain in area protected has been approximately 7,000,000 acres per year. With more adequate Federal appropriations this average gain can be substantially accelerated. For the fiscal year 1943 other than Federal funds are being provided by the states and private owners to the total amount of \$10,303,158. It is a significant fact that state and private funds available for the work have increased at a considerably greater rate than has been the case to date with Federal funds. Such increases as have been made in Federal funds have served as a decided stimulus to increased state and private funds and not as replacements for such funds. The more poorly financed states are enabled by these Federal allotments to extend their fire control activities and place more forest acres under protection. In the better financed forestry departments the Federal assistance enables them to intensify their work and thus secure a greater reduction in forest fire losses. In the fiscal year 1942, of all funds spent under this program 58 percent was provided by the states, 19 percent by private forest owners and 23 percent by the Federal Government under this program. As stated above, the Clarke-McNary Law authorizes 50-50 participation.

STATE ALLOTMENT DATA
FOREST FIRE COOPERATION UNDER SECTION 2 OF THE CLARKE-MCMARY LAW

State	State and private funds budgeted fiscal year 1943	Federal allotments fiscal year 1943
Alabama	\$217,265	\$139,128
Arkansas	170,941	88,049
California	1,749,976	499,735
Colorado	58,391	6,627
Connecticut	91,471	42,074
Delaware	7,114	3,904
Florida	297,733	177,745
Georgia	166,981	91,052
Idaho (P)	132,087	62,737
Idaho (S)	36,172	14,729
Illinois	38,175	10,498
Indiana	58,427	21,986
Kentucky	24,506	21,140
Louisiana	211,559	104,108
Maine	87,650	75,410
Maryland	164,423	19,323
Massachusetts	220,991	62,688
Michigan	556,576	149,406
Minnesota	290,382	126,212
Mississippi	136,567	77,789
Missouri	44,759	37,119
Montana	148,734	54,815
Nevada	8,608	2,311
New Hampshire	86,403	33,115
New Jersey	158,207	25,142
New Mexico	26,643	3,572
New York	423,214	102,893
North Carolina	160,124	72,370
Ohio	53,360	20,192
Oklahoma	34,776	53,351
Oregon	1,064,272	286,144
Pennsylvania	300,601	64,014
Rhode Island	37,210	8,956
South Carolina	208,289	101,493
South Dakota	9,502	546
Tennessee	80,390	41,644
Texas	110,252	56,889
Utah	17,055	6,444
Vermont	43,231	17,234
Virginia	134,417	46,428
Washington	1,647,964	247,650
West Virginia	194,842	67,503
Wisconsin	436,040	125,975
Hawaii	8,558	831
Total allotment to States		3,384,172
Contingent and Reserve for Spring Season		473,075
Adm. and Inspection		197,753
Taxation and Ins. Studies		45,000
Grand Total	\$10,303,158	\$4,000,000

*Fiscal Year 1942

Forest taxation and insurance investigations: The taxation and insurance staff has been drawn upon heavily to handle economic phases of the information and technical assistance supplied to war agencies. Special attention has been given to labor, price, and transportation problems affecting production of forest products needed for war purposes. Reports on current developments affecting forest and sawmill labor assembled by this staff have been much in demand by war agencies.

In spite of this diversion of effort to war activities, the more urgent demands for service in the taxation field have been met. For example, a study of the forest tax situation in Florida has just been made in cooperation with the State Chamber of Commerce, State Forester, State University, and other agencies. Another instance is the assistance rendered the State Forester of Virginia, leading to consultation with the Governor regarding taxation problems affecting the forestry program in that state. The need for services of this character is a continuing one.

The important contribution which has been made to formulating the Department's policy regarding payments in lieu of taxes on the lands under its jurisdiction has been followed up by consultation with the Federal Real Estate Board in regard to this problem and related questions affecting other real property of the Federal Government. More than thirty-five bills on this general subject were introduced in the 77th Congress, and as one of the very few groups in the service which has given the matter serious study, the taxation staff has been called upon many times for information, advice, and analysis of bills. Since no legislative solution has yet been enacted, the problem promises to demand further services of this kind.

The forest insurance study is at present being largely deferred in favor of pressing needs connected with the war program. It has included consultation with the War Damage Corporation on rate setting and under-writing rules for standing timber in connection with provision for War Damage Insurance. Forest insurance specialists are likely to be called upon by this Corporation for further advice in connection with under-writing and possibly with loss adjustment problems involving standing timber.

(n) FOREST FIRE CONTROL (EMERGENCY)

No provision has been made in the regular Budget for the continuance of this program. If continued in 1944 because of the war emergency, it will presumably be financed through a special appropriation. Existing funds remain available until June 30, 1943.

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)
1. Intensifying and augmenting forest fire prevention and suppression measures on Federal state, municipal, and private lands	\$1,640,687	\$4,446,711	--
1942 appropriation obligated in 1943	4,446,711	-4,446,711	--
Unobligated balance	12,602	--	--
Total estimate or appropriation	6,100,000	--	--

WORK UNDER THIS APPROPRIATION

Objective: To protect strategic war industries located in or adjacent to forest areas, forest industries, and important forest resources on national forests, state and private lands.

The Problem: Among the Allied Nations, the United States is the principal producer of war materials. All-out production of these materials is the primary objective of the Nation today. Large forest fires can seriously disrupt this production program through:

1. The destruction of strategic facilities, such as ordnance depots, ammunition dumps, military establishments, and important manufacturing plants. Forest industries should be included in this category. At the present time, 70 to 80 percent of our lumber and 30 percent of our wood pulp are being used directly or indirectly in the war program.
2. The destruction of important transportation facilities, power lines, aqueducts, and communication lines serving these strategic war industries, many of which pass through forested areas.
3. The diversion of manpower from combat units and from war production to the control of forest fires.

The fire danger is greater than in normal times because:

1. Many important new war industries and military establishments have been located in forested areas without regard to the forest fire hazard.

2. The intense production program for war materials has increased the number of inexperienced and nonfire-prevention-conscious persons employed in harvesting forest products and in war industries located in or near forest areas.

3. The forests of this country, particularly those in the West, are vulnerable through direct enemy action because of the very definite dry seasons which prevail. Enemy planes dropping incendiary pellets could with certainty start thousands of fires in the western forests at any time during the summer period.

Combatting forest fires is much more difficult because of the shortage of manpower in many of the sparsely settled forest areas.

The Plan: This appropriation is being expended for intensification of protection efforts on critical forest areas near war industries and facilities, and areas supplying wood products for war needs, through existing protection organizations. These organizations, both Federal and state, are trained and experienced in fire prevention and fire suppression, and are being used to direct the emergency activity as a correlated program. Specifically these forest fire control organizations have expanded their efforts along the following lines:

- (1) Fire prevention, through
 - a. Stricter law enforcement practices.
 - b. Closures of critical areas, especially in periods of high fire hazard.
 - c. Surveys designed to ferret out all danger spots.
 - d. Fire hazard reduction in critical areas, especially around strategic war industries.
 - e. Specific instructions to all industrial operators in forested areas.
 - f. Other fire prevention measures.
- (2) Fire presuppression, through
 - a. Intensive training of all members of fire control organization, many of whom are inexperienced.
 - b. Recruitment and training of cooperator crews throughout forest areas.
 - c. Contacts designed to "line-up" all available manpower and equipment within a reasonable distance of forest areas.
 - d. Maintenance of all fire control improvements in advance of fire seasons, including roads and fire breaks.
 - e. Recruitment and training of student fire crews.
 - f. Enlargement and training of parachute crews.
- (3) Fire suppression

All of the steps listed above are designed either to keep down the number of fires which start, to ameliorate burning conditions or to have everything in readiness for action in case fires do start. Regardless of any action the

Fire control organizations take, fires will start and a certain percentage of them will be large. Prompt action is taken to suppress all of these fires with reasonable dispatch and with the lowest possible damage, cost of suppression, and diversion of war production effort.

(o) ACQUISITION OF LANDS FOR NATIONAL FORESTS

Appropriation Act, 1943	\$354,210
Proposed transfers in 1944 estimates to:	
"Salaries and expenses, Office of Solicitor" ..	-50,000
"Salaries and expenses, Bureau of Agricultural Economics, economic investigations"	-9,348
Total available, 1943	294,862
Budget estimate, 1944	100,000
Decrease (including decrease of \$4,748 in travel funds returned to surplus)	-194,862

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Acquisition of lands for national forests	\$1,702,040	\$290,114	\$100,000	\$(1) 190,114
Covered into Treasury in accordance with Public Law 674	- -	4,748	- -	-4,748
Unobligated balance	5,960	- -	- -	- -
Total estimate 1944 and comparable amounts 1943 and 1942	1,708,000	294,862	100,000	-194,862

DECREASE

The decrease of \$194,862 in this item for 1944 consists of \$4,748 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$190,114 which contemplates suspension of land acquisition under this item. The \$100,000 remaining is the amount required to perform the work necessary to consummate in the fiscal year 1944 the purchase of lands contracted for purchase in prior years, but which will not be vested in Federal ownership prior to the close of the fiscal year 1943; and to otherwise maintain the continuity of the long established organization.

WORK UNDER THIS APPROPRIATION

General: The work under this appropriation is concerned with the acquisition of land by the Government for national forest purposes under authority of the Act of Congress of March 1, 1911 (36 Stat. 961), as amended particularly by the Act of June 7, 1924 (43 Stat. 653).

Objective: The long-term objective of this appropriation is to vest in Federal ownership (a) all lands chiefly valuable for forest purposes within 76 national forest purchase units in 31 states and Puerto Rico, established under the provisions of the aforementioned Acts, and (b) lands in other areas which should be Federally owned and managed; and to so protect and manage such lands as adequately to safeguard the watersheds of navigable rivers and streams and insure future timber supplies. Rehabilitation of blighted regions, stabilization of industries and communities; provision of employment opportunity; and perpetuation and protection of scenic and wildlife resources, are collateral consequences of the basic purposes.

The Problem and its Significance: Privately owned lands on the headwaters of navigable rivers are subject to heavy cutting of timber, over-grazing, improper cultivation and the destructive forces of fire, insects and disease. Such misuse has greatly impaired the absorptive capacity of the soil of much of this land, thereby contributing to floodwater conditions and siltation of river channels. The restoration of such forest lands to their natural state and normal high capacity to absorb precipitation is essential to the maintenance of the navigability of rivers. Because of their very vital relationship to the economic welfare of the Nation, as major watersheds and sources of timber supply for future needs, their proper protection and management is of primary importance to the country.

Future availability of supplies of commercially usable timber adequate to national needs can be assured only by effective protection of all existing virgin and advanced second-growth forests from denudation by destructive forces, excessive cutting and general waste. Optimum restoration of forest cover, by natural methods of reproduction or by planting, is essential on all other lands chiefly valuable for the growing of trees.

Private ownership of a great portion of the lands under consideration creates definite conflicts between the financial interests and property rights of the individual owner of land and the broad requirements of community and national interest and welfare. Some of the most important services of forest lands cannot be financially capitalized by the private owner of the forest; that is, they make no direct cash returns to the landowner. Their realization may necessitate additional costs of protection and management, the waiver of immediate or maximum monetary returns. Few private owners voluntarily will forego pecuniary benefits or assume additional and uncompensated costs. This situation confronts the Nation with the alternatives of: (a) Direct regulation of the use and management of private forests, under new principles of public cooperation involving increased public contributions to equalize additional elements of cost or loss, or (b) public acquisition and management of such parts

of the forest area as will not, in private ownership, finance the costs of their adequate protection and management to the degree dictated by broad considerations of public welfare and interest.

Plan: The work under this project consists of vesting in Federal ownership those lands within the 76 purchase units that are offered for sale to the United States and which are chiefly valuable for forest purposes.

Revenues: Fees from the sale of timber, grazing, special uses and other sources approximating \$1,465,000 were collected from the 76 national forests and purchase units under this project and deposited in the Treasury in the fiscal year 1942. Twenty-five percent of this sum will be returned to the counties in which the forests are located for maintenance of schools and roads and 10 percent will be used for national forest roads. The annual revenue has been progressively increasing and is expected to continue to increase as the lands bought years ago begin to produce returns from maturing timber and other resources which have been developed or renewed by proper protection and management.

Progress and Current Program: The following table shows the progress that has been made in the acquisition of lands by the United States in the 76 established units and the approximate remaining acreage necessary to be acquired to attain the objectives of the project.

PROGRESS AND CURRENT PROGRAM

	6/30/41 (acres)	Progress or changes in 1942 (acres)	6/30/42 (acres)	Progress : estimated : in 1943 : (acres) :	Estimated status 6/30/43 (acres)
1. Gross area of units	49,354,260	+ 296,249	49,650,509	- -	49,650,509
2. Less area non-purchasable	7,083,152	-264,968	6,818,184	- -	6,818,184
3. Total acquirable area in units	42,271,108	+561,217	42,832,325	- -	42,832,325
4. Area in Federal ownership or in process of acqui- sition	18,835,475	+372,032	19,207,507	- -	19,207,507
5. Area remaining to be ac- quired	23,435,633	+189,185	23,624,818	- -	23,624,818
6. Estimated cost of Item 5 above	\$124,648,551	\$+11,610,977	\$136,259,528	- -	\$136,259,528
7. Number of purchase units in project	75	+1	76	- -	76

Note: The 1943 budget showed 77 purchase units in this project as of June 30, 1941. Two units, the Ozark and Ouachita in Arkansas, should have been reported under "Forest Receipts Projects" and have been so reclassified. The number of units, acreage, cost, etc., have been reduced accordingly for June 30, 1941 in this report.

SPECIAL ACCOUNTS

(p) PAYMENTS TO STATES AND TERRITORIES, NATIONAL FORESTS FUND

Appropriation Act, 1943 (revised) \$1,670,043
 Budget estimate, 1944 1,670,043

..... PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)
Payments to states and territories from national forests fund	\$1,532,968	\$1,670,043	\$1,670,043
Total	1,532,968	1,670,043	1,670,043

The law requires that 25 percent of all money received from the national forests during any fiscal year be paid to the states and territories in which the forests are located. The amount of this appropriation varies each year in direct proportion to national forest receipts during the previous fiscal year. Increases in this appropriation are offset by additional revenue to the Federal Treasury.

(q) PAYMENTS TO SCHOOL FUNDS, ARIZONA, AND NEW MEXICO
 NATIONAL FORESTS FUND

Appropriation Act, 1943 \$23,392
 Budget estimate, 1944 23,392

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)
Payments to school funds, Arizona and New Mexico, national forests fund	\$22,787	\$23,392	\$23,392
Unobligated balance	605	--	--
Total	23,392	23,392	23,392

The States of Arizona and New Mexico are reimbursed in such proportion of the gross proceeds of all the National Forests within those states as the area of land granted to the states for school purposes within the National Forests bears to the total area of all national forests within the states.

These payments are required by the Act of June 20, 1910 (36 Stat. 562 and 573) which provides "That the grants of Sections two, sixteen, thirty-two and thirty-six to said state, within National Forests now existing or proclaimed, shall not vest the title to said section in said state . . . but said granted sections shall be administered as a part of said forests, and at the close of each fiscal year there shall be paid to the Secretary of State, as income for its common-school fund, such proportion of the gross proceeds of all the national forests within said state as the area of lands hereby granted to said state for school purposes which are situated within said forest reserves . . . may bear to the total area of all the National Forests within said state . . . the amount necessary for such payments being appropriated and made available annually from any money in the Treasury not otherwise appropriated."

School lands are given the same form of management accorded adjacent national forest lands.

As soon after the close of the fiscal year as the receipts from national forests, and the area of school lands in the States of Arizona and New Mexico are authoritatively determined, the payments referred to above are made to the states. Payments in fiscal year 1942 were \$22,589 to Arizona and \$198 to New Mexico.

(r) ROADS AND TRAILS FOR STATES, NATIONAL FORESTS FUND

Appropriation Act, 1943 (revised) \$668,018
Budget estimate, 1944 668,018

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)
Roads and trails for states, National	:	:	:
Forests fund	\$520,003	\$668,018	\$668,018
1941 balance available in 1942	-548,440	- -	- -
1942 balance available in 1943	641,624	-641,624	- -
1943 balance available in 1944	- -	641,624	-641,624
1944 balance available in 1945	- -	- -	641,624
Total	613,187	668,018	668,018

An additional 10 percent of all moneys received from the national forests during each fiscal year is available at the end thereof to be expended by the Secretary of Agriculture for the construction and maintenance of roads and trails within the national forests in the states from which such proceeds are derived. (16 U.S.C. 50).

(s) COOPERATIVE WORK, FOREST SERVICE

Appropriation Act, 1943 (revised) \$2,000,000
Budget estimate, 1944 2,000,000

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)
1. Construction of improvements ...	\$712,981	\$839,000	\$839,000
2. Maintenance of improvements	153,177	170,000	170,000
3. Prevention and suppression of forest fires	394,712	410,000	410,000
4. Disposal of brush and other de- bris in timber-sale operations :	400,448	450,000	450,000
5. Forest investigations	48,774	55,000	55,000
6. Administration	46,348	50,000	50,000
7. Reforestation	17,131	20,000	20,000
8. Refunds to cooperators	9,032	6,000	6,000
Total obligations	1,782,603	2,000,000	2,000,000
1941 balance available in 1942	-1,727,795	- -	- -
1942 balance available in 1943	2,107,650	-2,107,650	- -
1943 balance available in 1944	- -	2,107,650	-2,107,650
1944 balance available in 1945	- -	- -	2,107,650
Total estimate or appropriation ..	2,162,458	2,000,000	2,000,000

Contributed funds are placed in this trust account, to facilitate the accomplishment of certain projects within the list of activities shown in the project statement, which are of mutual benefit to the Forest Service and to individuals, other public or private agencies, or organizations; to provide for the equitable division of the cost of projects; and to simplify completion by concentrating the direction of the projects under one head.

Many desirable proposed projects are of potential benefit to both the Forest Service and a second party. It is in the public interest to see that the other party or parties defray their fair share of the expense of such projects. This is especially true in the case of fire prevention and suppression on private lands intermingled with national forest land inasmuch as the Government must necessarily suppress fires on nearby lands regardless of ownership in order to protect its own property. In the case of brush disposal on national forest timber sales, this method of collecting from the operator as he cuts the timber insures the proper disposal of the debris resulting from the sale.

This authorization provides an efficient method of collecting a proportionate part of the cost of projects from other agencies, organizations, or individuals

when intermingled interests dictate that their share of the benefit justifies their participation in the expense.

The terms under which cooperative projects are undertaken are reduced to writing and are signed by both parties. In the case of brush disposal, however, the contract for the sale of timber outlines the cooperative arrangement between the Government and the operator.

Progress and Current Program:

The most satisfactory way of showing trends in this appropriation is through a comparison of total deposits by years. A table showing deposits in the fiscal years 1940 and 1941 is given below:

<u>Projects</u>	<u>1941</u>	<u>1942</u>	<u>Increase</u>
Construction and maintenance of improvements (includes roads)	\$601,497	\$856,367	\$254,870
Prevention and suppression of forest fires	429,888	583,450	153,562
Disposal of brush and other debris in timber sale operation	528,954	585,236	56,282
Forest investigation	37,320	60,805	23,485
Administration	59,160	59,598	438
Reforestation	<u>14,340</u>	<u>17,002</u>	<u>2,662</u>
Totals	1,671,159	2,162,458	491,299

SUPPLEMENTAL FUNDS

(Not otherwise explained)

(1) Direct Allotments

Project	Obligations, 1942	Estimated obligations, 1943	Estimated obligations, 1944
1. <u>Special Research Fund:</u> For special research on Bioclimatics and phenology	\$3,286	\$3,000	\$3,000
2. <u>Cooperative Farm Forestry, (Forest Service):</u>			
Cooperation with states in the procurement, protection, and distribution of forest tree and shrub seeds and plants for farmers	120,820	123,000	123,000
Cooperation with states in carrying out farm forestry operations, including intensive projects and technical service to legally competent and adequate organizations of farmers, and in farm forestry investigations	41,017	42,031	42,031
Prairie States Forestry Project	209,989	--	--
Assistance to farmers in marketing and utilization of farm wood products	--	221,951	296,751
Total, Cooperative Farm Forestry	371,826	386,982	461,782
3. <u>Conservation and Use of Agricultural Land Resources:</u> For administration of naval-stores conservation program	54,935	60,700	48,700
4. <u>White Pine Blister Rust Control (Forest Service):</u> For blister rust control on National Forests	683,357	1,042,992	1,042,992

Project	Obligations, 1942	Estimated obligations, 1943	Estimated obligations, 1944
5. <u>Flood Control, General (Transfer to Agriculture) (Forest Service):</u> Preliminary examinations and surveys, and works of improvement for headwaters control including upstream engineering, soil stabilization and reforestation, on selected watersheds authorized by Flood Control Acts	677,618	401,300	233,000
6. <u>Loans, Grants, and Rural Rehabilitation, Forest Service, Assisting and Servicing Loans and Relief:</u> For administration, rural rehabilitation project ..	7,241	1,544	- -
7. <u>Emergency Relief, Agriculture, Forest Service Administrative Expenses (Transfer from W.P.A.):</u> For administrative expenses in connection with program of work under Emergency Relief Appropriation Act of 1940 and 1941 ..	33,577	- -	- -
8. <u>Emergency Relief, Agriculture, Forest Service, Federal Non-Construction Projects, and Federal Construction Projects (Transfer from W.P.A.):</u> For conservation of forest resources, surveys and mapping, and development of campgrounds ..	762,739	- -	- -
9. <u>Emergency Relief, Agriculture, Forest Service, Planning and Review of W.P.A. Projects (Transfer from W.P.A.)</u>	4,299	1,885	- -
10. <u>Emergency Fund for the President, National Defense (Allotment to Agriculture):</u> For expenses of moving Forest Service Region 7 to Philadelphia, Pa. ..	24,562	- -	- -
11. <u>Working Fund (Agriculture) Forest Service (Advance from Federal Power Commission):</u> To cover non-personal expenses incident to the investigations and supervision of Federal Power Commission projects	1,252	1,200	1,200

Project .	Obligations, 1942	Estimated obligations, 1943	Estimated obligations, 1944
12. <u>Working Funds, Agriculture,</u>			
<u>Forest Service (Advances from</u>			
<u>War Department):</u>			
For examination, appraisal,			
abstracting, and other ex-			
penses in connection with			
the acquisition of pri-			
vately owned lands for the			
War Department	35,085	3,711	--
For educational courses			
given at the Forest Prod-			
ucts Laboratory, Madison,			
Wisconsin	--	50,000	--
Drafting of aeronautical			
charts	--	15,000	--
Mapping strategic areas	152,922	289,843	--
Investigation of lumber prob-			
lems involved in packaging :			
Army ordnance items	1,979	8,021	--
Investigation of packaging			
and container problems re-			
lating to Army Ordnance			
equipment, and the testing,			
development, modification,			
and improvement of shipping:			
containers, and preparation:			
of specifications therefor :	115,926	184,074	--
Investigations of the use of			
wood, plywood, and glues			
in aircraft	--	125,000	--
Purchase of steel lookout			
towers	866,000	--	--
For winterizing and operating:			
observation stations essen-			
tial to the Aircraft Warn-			
ing Service	400,552	3,546,858	--
Total, War Department ..	1,572,464	4,222,507	--

Project	Obligations, 1942	Estimated obligations, 1943	Estimated Obligations, 1944
13. <u>Working Funds, Agriculture,</u> <u>Forest Service (Advances from</u> <u>U. S. Navy Department):</u>			
Instruction courses for Navy:			
personnel in container			
construction and packaging:	- -	3,200	- -
Investigations of suitability of laminated wood in			
the construction of boats	2,810	6,000	- -
Investigations of strength			
properties of wood, ply-			
wood, and glues as applic-			
able to airplane design	- -	125,000	- -
General investigations on			
the use of wood in air-			
craft	- -	96,900	- -
Total, Navy Department	2,810	231,100	- -
14. <u>Salaries and Expenses, Office:</u> <u>for Emergency Management</u> <u>(Transfer to Agriculture,</u> <u>Forest Service):</u> For supplying:			
information to the War Pro-			
duction Board on production			
and requirements of forest			
products	- -	275,000	- -
15. <u>Acquisition of Lands, Chippewa</u> <u>National Forest, Minn. (Re-</u> <u>ceipt Limitation) (Transfer</u> <u>from Interior Department):</u>			
For the acquisition of lands:			
within the Chippewa			
National Forest under the			
provisions of the Act of			
June 8, 1940	4,108	- -	- -
16. <u>Working Funds, Agriculture,</u> <u>Forest Service (Advance from</u> <u>Office for Emergency Manage-</u> <u>ment):</u>			
For pulpwood survey for the			
War Production Board	- -	15,360	- -
For survey of outstanding			
Forest areas in other			
American republics	- -	50,000	- -
For survey of Sitka spruce			
in the Tongass National			
Forest, Alaska	10,000	- -	- -
Total, Office for Emergen-			
cy Management	10,000	65,360	- -

Project	Obligations, 1942	Obligations, 1942	Estimated obligations, 1944
17. <u>Working Funds, Agriculture,</u> <u>Forest Service (Advances from</u> <u>the Department of the Interior):</u>			
: For protection of Oregon and : California Railroad and Re- : conveyed Coos Bay Wagon : Road Grant Lands located : within the boundaries of : national forests	18,866	18,502	18,502
: Reconstruction of Forest Ser- : vice telephone lines to : eliminate power interfer- : ence caused by Bonneville : Project	18,411	--	--
: Relocation of Forest Service : facilities on lands sub- : ject to flooding from : Shasta Dam, California ...	67,893	4,169	--
: Total, Department of : Interior	105,170	22,671	18,502
18. <u>Working Fund, Agriculture,</u> <u>Forest Service, (Advance from</u> <u>Access Roads, Public Roads</u> <u>Administration) (National De-</u> <u>fense):</u> To cover cost of con- : struction, maintenance, and : improvement of access : roads to sources of raw : materials	--	1,030,000	--
19. <u>Working Fund, Agriculture,</u> <u>Forest Service (Advance from</u> <u>the Board of Economic Warfare,</u> <u>1943):</u> To provide funds to the : Department of Agriculture : for the purpose of deter- : mining Cinchona resources : in Colombia and the es- : tablishment of a bark : collection program	--	4,934	--

Project	Obligations, 1942	Estimated obligations, 1943	Estimated obligations, 1944
20. <u>Working Fund, Agriculture,</u>			
<u>Forest Service (Advance from</u>			
<u>Office of Price Administra-</u>			
<u>tion): To provide funds for</u>			
the pulpwood price and			
trade practice survey	- -	6,000	- -
TOTAL, SUPPLEMENTAL FUNDS			
(Direct allotments)	4,319,233	7,757,186	1,809,176

SUPPLEMENTAL FUNDS - continued

(2) Allotments under Civilian Conservation Funds
(financed by War Department)

(Project liquidated in fiscal year 1943)

Project	Allotments, 1942	Allotments, 1943
Civilian Conservation Corps (Act of June 28, 1937, and supplemental acts; allotments through War Department)		
1. National forests	\$3,506,925)	
2. Alaska	294,102)	
3. State, municipal, and privately owned lands	4,480,827)	1,078,100*
4. Puerto Rico	1,004,539)	
Total, Civilian Conservation Corps Funds	12,286,393	1,078,100*

*Liquidation allotment for camps under Forest Service supervision.

Civilian Conservation Corps activities (authorized by Act of June 28, 1937, and supplemental acts; allotment through War Department. Project terminated by Act of July 2, 1942, Public Law 647, 77th Congress).

	<u>1942</u>	<u>1943</u>
1. Civilian Conservation Corps Work on National Forests (includes a small number of miscellaneous camps)	\$6,506,925	(Being liquidated)

The number of camps on national forests on July 1, 1941, and January 15, 1942 (all camps on National Forests unless otherwise indicated) are given below. While a few camps remained on July 1, 1942, they were in process of liquidation on that date, and practically all camps were closed out by the end of that month.

	<u>July 1, 1941</u>	<u>January 15, 1942</u>
Alabama	3	3
Tennessee Valley Authority	3	3
Arizona	7	4
Arkansas	11	5
California	28	13

July 1, 1941January 15, 1942

Colorado	6	4
Dist. of Columbia (Bur. of Plant Industry)	1	1
Florida	3	2
Georgia	4	3
Idaho	15	7
Bureau of Animal Industry	1	1
Illinois	3	2
Indiana	2	2
Kentucky	5	4
Louisiana	4	4
Michigan	18	11
Minnesota	12	6
Mississippi	7	6
Missouri	8	4
Montana	10	6
Bureau of Animal Industry	1	1
Nebraska	1	1
Nevada	2	1
New Hampshire	3	1
New Mexico	5	3
North Carolina	6	4
Tennessee Valley Authority	1	1
Ohio	2	1
Oklahoma	1	1
Oregon	13	8
Pennsylvania	2	1
South Carolina	4	2
South Dakota	5	2
Tennessee	4	3
Tennessee Valley Authority	10	8
Texas	5	2
Utah	4	2
Vermont	1	1
Virginia	8	6
Tennessee Valley Authority	1	—
Washington	10	5
West Virginia	4	3
Wisconsin	10	5
Wyoming	5	2
Cheyenne Horticultural (B.P.I.)	<u>1</u>	<u>1</u>
Total Camps	260	156
Total, National-Forest camps	241	140
Total, Tennessee Valley Authority camps ..	15	12
Total, Bureau Plant Industry camps	2	2
Total, Bureau Animal Industry camps	2	2
Total	<u>260</u>	<u>156</u>

WORK UNDER FOREGOING ALLOTMENT

The allotment in 1942 was used for the pay of supervisory and facilitating personnel necessary for the field work done from C.C.C. camps mainly on the national forests; also for the purchase of necessary equipment and construction materials and for miscellaneous expenses incident to the field work of the camps. The field work on the national forests included the construction and maintenance of physical improvements needed for the protection and administration of the forests, tree planting, thinning of young stands of timber, insect and tree disease control, fire prevention and suppression, etc.

In 1943, funds were made available for the liquidation of the project.

	<u>1942</u>	<u>1943</u>
2. <u>Civilian Conservation Corps Work in</u>		(Being
<u>Alaska</u>	\$294,102	liquidated)

WORK UNDER FOREGOING ALLOTMENT

The allotment in 1942 (Alaska) was used for pay of enrolled members of the Civilian Conservation Corps, allowances to their dependents, and for salaries and wages of supervisory and clerical personnel needed in connection with the work. It was also used for the purchase of clothing, subsistence, supplies, and camp equipment required for enrolled men of the Corps and for the purchase of construction materials used in the work. Classes of work done under this allotment included construction of trails, minor roads, bridges, water development and improvement, and miscellaneous administrative improvements; roadside clearings and public campground improvement; estimating timber resources; and other miscellaneous work. The men engaged in the work were recruited from the unemployed local residents, including Indians, without regard to age.

In 1943, funds were made available for the liquidation of the project.

	<u>1942</u>	<u>1943</u>
3. <u>Civilian Conservation Corps Work on</u>		(Being
<u>State, Municipal, and Privately owned</u>		liquidated)
<u>Forest Land</u>	\$4,480,827	

Number of camps by states on July 1, 1941, and January 15, 1942, are given below. Practically all camps were in process of liquidation on July 1, 1942.

July 1, 1941

January 15, 1942

Alabama	6	3
Arkansas	4	2
California	3	1
Connecticut	6	1
Florida	5	3
Georgia	4	2
Idaho	4	2
Illinois	1	1
Indiana	4	4
Iowa	2	1
Kentucky	4	3
Louisiana	3	2
Maine	3	1
Maryland	4	3
Massachusetts	7	1
Michigan	10	4
Minnesota	9	4
Mississippi	5	3
Missouri	3	1
Montana	1	1
Nevada .....	..	1
New Hampshire	2	..
New Jersey	7	4
New York	24	9
North Carolina	4	3
Ohio	4	3
Oklahoma	1	..
Oregon	6	3
Pennsylvania	24	14
Rhode Island	1	1
South Carolina	4	2
Tennessee	2	1
Texas	3	3
Vermont	3	..
Virginia	7	4
Washington	5	3
West Virginia	5	4
Wisconsin	9	4

Total camps on state lands, etc. 199 102

WORK UNDER FOREGOING ALLOTMENT

The 1942 allotment was used for the payment of expenses incurred in the conduct of Civilian Conservation Corps work on state, municipal, and privately owned lands, including the purchase of supplies, materials, and equipment used in the work, for payment of salaries and wages of supervisory personnel directing the work of the enrolled men, and for other necessary expenses incident to the work.

The work accomplished under this allotment included the protection of state and private forest land from fire by construction of firebreaks, lookout towers, communication systems, truck trails, tool sheds, guard houses, and the fighting of forest fires; protection of state and privately owned forests from the epidemic spread of forest insects and tree diseases; and the construction of simple dams and the planting of trees, grass, etc., for the control of erosion and flash runoff at the headwaters of streams.

	1942	1943
4. <u>Civilian Conservation Corps Work in</u>		(Being
<u>Puerto Rico</u>	\$1,004,539	liquidated)

WORK UNDER FOREGOING ALLOTMENT

The 1942 allotment (Puerto Rico) was used for the payment of salaries to authorized enrollees and the supervisory personnel engaged in the technical direction of the work projects on the Luquillo National Forest and the insular forests and for the purchase of equipment and supplies incident to the work.

The work projects comprised the construction and maintenance of roads and trails, production of nursery stock, making new forest plantations and thinning old ones, forest thinnings to improve the timber stands within the national and insular forests, and development of a recreational area within the National Forest. Camps were not established as they were in the states, since a large proportion of the enrollees lived at home.

PASSENGER-CARRYING VEHICLES

The authorization for the purchase of passenger-carrying vehicles for the Forest Service from appropriations other than Forest Roads and Trails provides for the replacement of 72 vehicles at an estimated cost of \$57,310.

From the appropriation Forest Roads and Trails an authorization which will provide for the replacement of 13 vehicles is recommended at an estimated cost of \$10,020.

While the 1944 purchase program calls for the replacement of 95 passenger vehicles, actually all of the old vehicles to be replaced may not be turned

in on the purchase of new automobiles. It has been found to be more economical in some of the western regions, because of shop facilities and the difficulty of obtaining parts for some of the older cars, to dismantle the old automobiles, using the serviceable parts so far as possible in the repair of other passenger vehicles and disposing of the remainder through exchange in the purchase of new repair parts.

Practically all of the old vehicles to be replaced are of 1938 model or older, the majority being of 1935, 1936, and 1937 models. These machines have been operated under practically all conditions of use but the greater portion of use has been over rough forest roads. The average mileage of the vehicles when replaced will be approximately 59,000.

FOREST ROADS AND TRAILS

Appropriation Act, 1943	\$7,000,000	13
Proposed transfer in 1944 estimates to "Salaries and expenses, Bureau of Agri- cultural Economics, economic investi- gations"	-34,665	
Total available, 1943	6,965,335	
Budget estimate, 1944	3,778,723	
Decrease (including decrease of \$12,862 travel funds returned to surplus)	-3,186,612	

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
				(1)
1. Forest Highways	\$6,973,000	\$3,173,750	\$ - -	-\$3,173,750
2. Forest road development ..	2,982,500	3,778,723	3,778,723	- -
Covered into Treasury in ac- cordance with Public Law 674 :	- -	12,862	- -	-12,862
Total estimate 1944 and comparable amounts for 1943 and 1942	9,955,500	6,965,335	3,788,723	-3,186,612

DECREASES

The decrease of \$3,186,612 in this item for 1944 consists of \$12,862 decrease in travel funds (returned to surplus in 1943) and:

- (1) A decrease of \$3,173,750 in "Forest highways"

This decrease will be met by limiting expenditures in the fiscal year 1944 to maintenance, surveys, administration, a small amount of uncompleted work on the strategic network of national-defense highways already under contract, and by discontinuing one of the three prison labor camps engaged on road construction. Expenditures will be financed from unprogrammed balances available from previous appropriations.

Forest Road Development estimate for 1944, while not decreased, includes no funds for new construction. Only necessary maintenance work is planned for 1944.

CHANGE IN LANGUAGE

The estimates include a proposed change in language eliminating the authority for the purchase of land and buildings at Portland, Oregon. The portion to be eliminated is [Provided further, That there shall be available from this appropriation not to exceed \$38,000 for the purchase of land and buildings at Portland, Oregon, for the storage and repair of Government equipment for use in the construction and maintenance of roads.]

Other changes in language are made to reflect the status of the road authorizations with reference to the 1944 appropriations.

WORK UNDER THIS APPROPRIATION

Forest Highways:

Objective: To complete the Forest Highway system which consists of forest roads which are of primary importance to the states, counties, or communities within adjoining, or adjacent to the national forests. The status of the system on June 30, 1942:

	<u>Miles</u>	<u>Percent</u>
Satisfactory standard	11,582	47
Unsatisfactory standard	11,683	48
Nonexisting	<u>1,168</u>	<u>5</u>
Total	24,433	100

The Problem and its Significance: The Federal Government has a definite obligation to the public to provide for adequate highway transportation necessary to the national forests and of primary importance to the states, counties, or communities. The highway transportation system in and near national forests should for obvious reasons be advanced in step with connecting highways. During the war very little work except necessary maintenance is planned.

General Plan:

Maintenance: The cooperative agreements in practically all cases provide for Federal financing of maintenance for only the two-year period following completion of construction and for state and county financing thereafter.

The estimate of necessary maintenance for fiscal year 1944 involves work on approximately 1,000 miles of Forest Highways.

Construction program: The long-term program is the reconstruction or betterment of the 11,683 miles which are now existing but of unsatisfactory standards, and the construction of 1,168 miles of highways, where none now exist.

For the most part, this program will be deferred until after the war.

Examples of Progress and Current Program: Although approximately \$4,000,000 was expended for construction during fiscal year 1942, accomplishments did not keep pace with the increase in requirements due to demands for higher standards, because of increased traffic, heavier loads, and the addition of newly acquired forest land to be served by the planned Forest Highway system.

As the few projects under way are completed, construction work will approach a complete stop. Practically nothing except maintenance will be accomplished during the war.

Forest Development Roads and Trails:

Objective: The ultimate objective is to complete the forest road and trail system. The needs have been determined by a systematic transportation planning method based on a land-use plan to accomplish the desirable development and long-term utilization of forest lands and resources. The transportation plan is currently revised to meet changing transportation requirements for resource development, protection, and utilization.

During the war the objective is to do the maintenance work necessary to preserve the Federal investment in the existing system and to provide for essential war-time travel. The existing system includes 99,334 miles of truck trails and 148,971 of foot and horse trails necessary for the protection and administration of the national forest lands and resources. Many of the roads are used to haul strategic materials, principally timber and minerals.

The Forest Road Development Fund will all be needed for necessary maintenance.

No construction work is planned for the fiscal year 1944.

The Problem and its Significance: The gross national forest area is approximately 10 percent of the entire area of the continental United States. The area is generally rough, rugged, mountainous, and remote. Forest resources are critical materials now. They include 565 billion board feet of commercial saw timber besides many other timber, land, and water resources. Some 80,000,000 acres of the national forests are utilized for grazing of over 12,000,000 sheep, goats, cattle, and horses each year. Developed and undeveloped water power amounts to 11 million horsepower. Mineral resources in the forests, especially such as chrome, tungsten, copper, mercury, are vital to the war program. Nearly four million people live in or near the national forests.

Providing the transportation system necessary for the proper and efficient administration, protection, development, and utilization of the national forest land and resources is an obligation of the Federal Government.

General Plan: On June 30, 1942, the planned Forest Development Road System consisted of the following miles of existing and proposed truck-trails and trails:

	Truck-trails		Trails	
	Miles	Percent	Miles	Percent
Satisfactory standard	60,841	47	113,831	69
Unsatisfactory standard	38,493	30	35,140	21
Nonexisting	29,796	23	18,808	11
Total	129,130	100	167,779	100

Examples of Progress and Current Program: No progress is anticipated toward the reconstruction and betterment required on the 38,493 miles of truck-trails and the 35,140 miles of trails which are now existing but of inadequate standard to meet the needs. Nor is construction work contemplated on the 29,796 miles of truck-trails and 18,808 miles of trails now non-existent but which are considered necessary for the national forest administration, protection, utilization, and development.

Since July 1, 1942, no Civilian Conservation Corps aid has been available.

The program for 1944 is to maintain the existing system as required to preserve the investment and to provide for travel of war necessity for such as fire control, for production of strategic materials including the products of agriculture and grazing lands, for essential travel to serve communities in and near the forests.

The program for 1944 contemplates deferring any maintenance work that can be postponed without adversely affecting the Federal investment or holding up necessary war-time travel.

EMERGENCY RUBBER PROJECT

Regular 1943 Appropriation Act	- -
Second Supplemental National Defense Appropriation Act, 1943	\$19,000,000
Total available, 1943	19,000,000
Budget estimate, 1944	56,000,000
Increase for 1944	+37,000,000

PROJECT STATEMENT

Project (Bureaus)	1942	1943 (Estimated)	1944 (Estimated)	Increase or decrease
Forest Service	\$4,129,198	\$27,101,638	\$54,951,530	27,349,892
Plant Industry	57,000	367,027	584,000	216,973
Agricultural Chemistry: and Engineering ...	20,360	338,431	405,000	66,569
Entomology & Plant Quarantine	- -	9,346	26,420	17,074
Office of Solicitor .	- -	12,000	33,050	21,050
Total	4,206,558	27,828,442	56,000,000	28,171,558
1942 Appropriation available 1943	+8,828,442	-8,828,442	- -	+8,828,442
Total estimate or appropriation	13,035,000	19,000,000	56,000,000	37,000,000(1)

INCREASE

(1) The apparent increase of \$37,000,000 is necessary to meet the costs of a rapidly expanding program. The actual increase in total obligations in 1944 over 1943 is \$28,171,558.

The project is a distinctly new enterprise, (authorized under the Act of March 5, 1942) and has been in operation less than one year. There follows a brief general statement; a detailed list of actual and proposed accomplishments for each of the fiscal years 1942, 1943 and 1944; and a breakdown by major items of expenditure for all participating bureaus.

GENERAL STATEMENT

The objective of the Emergency Rubber Project is to provide for the planting of rubber-bearing plants and to make available a source of crude rubber.

The cultivation of guayule and other rubber-bearing plants within the United States on a large scale production basis has not been undertaken heretofore primarily for the reason that hevea rubber of superior quality was available from other sources at prices which practically eliminated competition. As a result of the war 97 percent of the natural rubber supply has been cut off making it necessary to exploit all possible domestic sources for satisfactory substitutes.

The primary potential source of a domestic supply of natural rubber is guayule, a plant native to northern Mexican deserts, which has been successfully cultivated on a small scale in limited areas on the California coast, and improved notably under cultivation as to rubber-bearing capacity. From the information gained through small scale operations carried on at a leisurely pace, it has been necessary since March 1942, to project and initiate the execution of a very large guayule cultivation program. This program requires new nurseries considerably removed from sites originally used. It will be necessary to establish plantations far from the original location as the program expands. Cultivation of the shrub in other states and countries poses new problems. The production of satisfactory quantities of rubber in the plant in two years under irrigated cultivation to meet war needs in contrast to the more common practice of a much longer period of cultivation without use of irrigation creates additional problems. The various factors conducive to successful growth of the shrub such as favorable climate and soil conditions, control of pests, diseases, and other conditions, are not fully explored. There is no complete assurance that the large scale production program now being undertaken will achieve the estimated results based on the experience of small scale production. But based on the best experimental and production data available the current program providing for cultivation largely on irrigated land, harvesting the crop after two growing seasons in the field is believed to be best adapted to produce substantial quantities of rubber in the shortest possible time.

The present standard methods of recovering rubber from the guayule shrub are somewhat crude and probably subject to improvement as to efficiency and other collateral values such as a reduction in the amount of critical metals necessary to construct a plant to meet certain processing capacities. Investigations leading to a process resulting in greater extraction efficiency will be continued for guayule and other plants.

There is every reason to believe that the guayule rubber production program can furnish a supply of natural rubber, for which there is no available satisfactory substitute for compounding with synthetic rubber for certain essential uses, in sufficient time and quantity to be of material aid in the war effort if the war is not concluded by 1944 or to furnish a part of the needed supply of natural rubber for post-war purposes.

Other plants that are potential sources of rubber under cultivation are goldenrod, Russian dandelion (kok-saghyz) and Cryptostegia. Each of these, while substantially below guayule as a producer of rubber, may be cultivated as a crop to produce rubber annually, and the potential rubber-producing capacities of these plants make cultural and extraction investigations worthwhile. However, no provisions are made in the 1944 estimate for a production program for the above mentioned species. Test plantings of these species extend now in the aggregate over most of the United States and into other parts of the western hemisphere. With respect to kok-saghyz and goldenrod, experimental data are being assembled to permit a judgment as to the value of undertaking field scale plantings for rubber production.

A number of native wild species containing relatively low rubber content, while unimportant alone as a potential source of rubber, might be useful to augment rubber supplies from cultivated plants.

Investigations with the more promising wild species are carried on concurrently with processing investigations of the best cultivated species, as a secondary phase of rubber extraction investigations.

The 1944 estimate does not provide for erection of processing factories at this time for the reason that most efficient and economical designs for factories have not been determined. Investigations now under way give some promise of developing an extraction process which, if successful, may radically change methods of manufacture with the possibility of erecting factories at a considerable saving of funds and strategic materials. It is therefore deemed advisable to await final results of the investigations before requesting funds for erection of factories.

GUAYULE

1942

Physical Improvements

1. Purchased Intercontinental Rubber Company seed, patents, properties, etc., in California.
2. Constructed and equipped 1,000 man labor camp.
3. Built and equipped seed processing plant 80 x 108 feet.
4. Began work reconditioning Salinas rubber factory.
5. Installed irrigation system, etc., for 11,750 seeded nursery.

1943

Physical Improvements

1. Construct and equip labor camps for 11,000 workers.
2. Construct about 56 equipment sheds.
3. Construct and equip nursery buildings, warehouses, equipment and packing sheds, pump house, office buildings, seed-cleaning and storage buildings.
4. Construct 10 equipment repair shops and oil houses.
5. Install irrigation system for 31,000 seedbeds.
6. Construct and equip pilot mill.
7. Finish reconditioning Salinas rubber factory.

1944

Physical Improvements

1. Construct and equip labor camps for 30,000 men.
2. Construct and equip one large and two small equipment repair shops.
3. Construct and equip two seed treating plants and storage facilities.
4. Construct and equip 3 field repair shops and 6 small combination offices and warehouses for plantations.

ANAYUE

1942

Plantations

1. Established during 1942 spring about 900 acres of field plantations with seedlings in Salinas nursery acquired from Intercontinental Rubber Company.

1943

Plantations

1. Establish during winter of 1942 and spring 1943. Approximately 32,000 acres of field plantations. About 3,000 on dry land and 29,000 on irrigated land. Plant above acreage with seedlings from 1942 Salinas beds.
Cultivate and irrigate to June 30, 1943.

2. Establish during spring 1943 approximately 56,000 acres. About 5,000 acres dry land and 51,000 acres irrigated land.

Plant above acreage with seedlings from 20,000 Southern California seed beds.

Cultivate and irrigate to June 30, 1943.

1944

Plantations

1. Cultivate 88,000 acres, irrigate about 80,000 acres from July 1, 1943, to June 30, 1944.
Plantation established in 1943.

2. Establish 120,000 acres during winter 1943 and spring 1944. About 11,000 dry land and 109,000 irrigated land.

Plant above acreage with seedlings from 20,000 seedbeds Southern Calif., 11,750 seedbeds Salinas and 11,000 seedbeds from Central Calif. Cultivate and irrigate to June 30, 1944.

3. Establish during spring 1944 56,000 acres about 5,000 dry land and 51,000 irrigated land.

Plant above acreage in late spring 1944 seedlings from 20,000 seedbeds Southern Calif.

Cultivate and irrigate to June 30, 1944.

CHAYULE

1942

Physical Improvements

1. Purchased Intercontinental Rubber Company seed, patents, properties, etc., in California.
2. Constructed and equipped 1,000 man labor camp.
3. Built and equipped seed processing plant 80 x 108 feet.
4. Began work reconditioning Salinas rubber factory.
5. Installed irrigation system, etc., for 11,750 seeded nursery.

1943

Physical Improvements

1. Construct and equip labor camps for 11,000 workers.
2. Construct about 56 equipment sheds.
3. Construct and equip nursery buildings, warehouses, equipment and packing sheds, pump house, office buildings, seed-cleaning and storage buildings.
4. Construct 10 equipment repair shops and oil houses.
5. Install irrigation system for 31,000 seedbeds.
6. Construct and equip pilot mill.
7. Finish reconditioning Salinas rubber factory.

1944

Physical Improvements

1. Construct and equip labor camps for 30,000 men.
2. Construct and equip one large and two small equipment repair shops.
3. Construct and equip two seed treating plants and storage facilities.
4. Construct and equip 3 field repair shops and 6 small combination offices and warehouses for plantations.

GUAYULE

1942

Experimental Plantings

Established 85 indicator plots averaging about 1 acre each to determine areas suitable for guayule culture in California, Arizona, New Mexico and Texas. Total acreage 100.

1943

Experimental Plantings

Maintain and operate plots established in 1942. Establish and maintain 66 additional experimental plantings and test plots in Arizona, New Mexico and Texas. Plots to total about 900 acres, range mostly 5 to 100 acres.

1944

Experimental Plantings

Maintain and operate 1942 and 1943 experimental plantations and indicator plots.

Establish and maintain and operate 150 acres of experimental areas in plantations throughout Southwestern States.

1942

Studied extraction methods for improvements thereon.

1943

Rubber Extraction

Guayule

Construct pilot mill and continue extraction studies. These tests and studies also indicate results of various cultivation and irrigation practices on the rubber production capacity of the guayule shrub.

1944

Continue pilot plant investigations.

Experimental Plantings and Rubber Extraction
for Species other than Guayule

Rok-saghyz (Russian dandelion)

1942

Received shipment from U.S.S.R.
Test plantings initiated in 25
northern states and Alaska.

1943

Maintain and extend test plantings. Harvest
crop in fall 1942. Rubber extraction and
tests thereon now under way. Develop
machinery to eliminate hand labor. Sow and
extend experimental plantings in spring 1943.
Prospectus now being prepared for enlarged
program. If approved test plantations will
be conducted concurrently to furnish informa-
tion on various cultural practices and their
relation to rubber producing qualities in an
effort to develop high yielding rubber strains.

Goldenrod

1943

Study methods of propagation, planting and
cultivation. Conduct tests to devise
practical methods of extracting rubber.
Develop equipment for planting and har-
vesting. Prospectus now being prepared
for enlarged program.

1944

Continue plantings and
extraction tests on ap-
proximately the 1943
scale. However, if an
expanded production pro-
gram is under way in 1944
the 1944 proposed program
will be conducted concu-
rently therewith.

1944

Continue extraction pro-
pagation planting and
cultivation studies. If
enlarged program is ap-
proved the work in the
proposed 1944 program
will be changed accord-
ingly.

Study methods of propagation,
planting and cultivation.

Cryptostegia

1942

1943

1944

Establish indicator plantings in Florida and Southwestern United States. Conduct rubber extraction tests.

Maintain, extend and operate indicator plantings established in 1943 and also continue rubber extraction investigations.

Rabbitbrush

1942

1943

1944

Because of unpromising results further work on this species is considered inadvisable.

Study rubber extraction processes.

Pinguo

1942

1943

1944

Conduct rubber extraction investigations for rubber quantity and quality to determine whether cultivation of this plant for rubber production purposes would prove feasible.

Appropriation Estimate of the Emergency Rubber Project
Fiscal Year 1944

I. Nurseries (Guayule)

- A. Rental of 2,775 acres of land for 12 months
at average price of \$45 per acre \$124,875
- B. Care and maintenance of equivalent of 63,000 seedbeds
for 12 months including ground preparation, sowing
of seed, irrigation, cultivation and weeding, appli-
cation of fertilizers and sprays, and digging, grad-
ing and packing approximately 2,016,000,000 guayule
seedlings. Two crops to be produced from 20,000 seed-
beds in Southern California nurseries 10,123,477

Breakdown of Nursery Activities under B

<u>Activity</u>	<u>Cost per M Seedlings</u>	<u>Activity Estimate</u>
Ground preparation	\$.11	221,288
Seed treating and sowing	.07	152,320
Irrigation	.32	648,745
Cultivation and weeding	1.77	3,560,038
Fertilizers	.12	240,692
Stock distribution (digging, lifting, packing, grading)	2.62	5,300,394
	<u>\$5.01</u>	<u>\$10,123,477</u>

II. Plantation Establishment and Operation: (Guayule)

- A. Surveys, investigations and negotiations
preliminary to the leasing of 194,100 acres
plantation lands 1,000,676
- B. Rental of plantation lands as follows:
- F. Y. 1942 plantations, 990 gross acres 12 months
\$13.34 per year \$13,210
- F. Y. 1943 plantations, about 97,000 gross acres
12 mos. @ approximately \$35 per year 3,234,880
- F. Y. 1944 plantations, rental of about 129,500
gross acres, 9 months; about 64,600 gross
acres, 6 months; at the rate of approxi-
mately \$35 per year 4,564,018 7,812,108

The amount leased must be increased by an average
of 10% over and above the acreage planted because
of the presence of headlands, roads, buildings,
etc., which prevent planting the full acreage.

- C. Establishment and care of approximately 176,000 net acres of new plantation, including ground preparation, planting, cultivation, hoeing, and irrigation \$15,517,061

Breakdown for item C

Activity	Per acre estimate	Activity Est.
Ground preparation	\$15.73	\$2,768,464
Transportation	1.92	337,976
Planting	18.41	3,251,124
Cultivation & hand-hoeing	41.24	7,258,944
Irrigation	10.80	1,900,553
Total	\$88.10	\$15,517,061

- D. Care of approximately 89,000 net acres of plantation established prior to F. Y. 1944, including cultivation, hoeing and irrigation 6,187,495

Breakdown of item D

Activity	Per acre estimate	Activity Est.
Cultivating & hand-hoeing	\$49.35	\$4,393,008
Irrigation	20.17	1,794,487
Total	\$69.52	\$6,187,495

Note: The reasons for differences in cultivation and hand-hoeing and irrigation costs under items C and D are as follows:

a. Cultivating and hand-hoeing

The 1943 plantations cover a full 12 months whereas the 1944 plantations average less than a full year as the seedling planting season does not begin until the early fall of the year.

b. Irrigation

Two applications for plantations made in 1943 against one for 1944. Also land planing and land leveling charges for 1944 are included, whereas this work is not repeated for 1943 plantations.

III Equipment and Structures

- A. Miscellaneous automotive and farm equipment for nursery and plantation operation consisting of seedling diggers, seedling toppers, tractors of various makes and sizes, stake trucks, pickup trucks, tractor trailers, cultivators, planting machines, passenger cars, surveying and drafting equipment and instruments, tools for equipment repair shops and blacksmith shops and other miscellaneous agricultural and specialized equipment for the expanded program and to replace worn-out equipment 83,729,854
- B. Equipment for 30,000 man camps. Consists of beds, mattresses, blankets, pillows, sheets, tables, chairs, dishes, pots and pans, lamps, stoves, refrigerators, etc. 1,401,950
- C. Structures - Labor camps for 30,000 men and equipment repair shops, seed treating and storage facilities 8,247,400

IV Harvesting and Milling Operations

- A. Harvest approximately 552 tons of shrub \$4,775
- B. Mill 552 tons shrub 11,040
- 15,815

V Seed Collection, Processing and Storage

- A. Collection of 1,000,000^{1/2} (clean weight) guayule seed 263,634
- B. Cleaning, processing and storing 1,000,000^{1/2} of guayule seed 279,800
- 543,434

VI Kok-saghyz

- A. Experimental plantings of approximately 150 acres 78,750

VII Guayule Cultivation in Mexico

This provision is for a small program of guayule cultivation in Mexico on a commercial basis by furnishing seed, seedlings, and technical assistance to the Mexican guayule rubber companies under cooperative arrangements with the Mexican government to stimulate production of cultivated guayule

20,920

VIII Washington Office Expenses

For salaries and expenses of Washington office employees \$77,715

Total Forest Service estimate 54,951,530

Estimate for Other Participating Bureaus and Offices

The estimates for 1944 for the Bureau of Plant Industry, Bureau of Agricultural Chemistry and Engineering, Bureau of Entomology and Plant Quarantine, and Office of the Solicitor are to furnish funds for actual field, laboratory, and legal services on an expanded Emergency Rubber Project program. These services are necessary for the effective day-to-day conduct of the production program.

- IX Facilitating Services

Agricultural Research Administration:

Bureau of Plant Industry: 584,000

A. Soils surveys - to determine soil suitability for planting rubber-bearing plants

B. Control of plant diseases. Many known diseases can attack a nursery or plantation and wipe out entire plantings

C. Experimental plantings and indicator plots - to determine proper methods of planting, irrigating, spacing, fertilizing, and cultivating for each particular area

D. Improve varieties of rubber-bearing plants to develop a winter-hardy plant; also one adapted to different soils, thus increasing potential cultivation areas

Bureau of Agricultural Chemistry and Engineering: 405,000

A. Develop production, harvesting and processing machinery to facilitate and improve production, harvesting, and processing methods

B. Pilot laboratory investigations - to develop and improve extraction and processing techniques

Agricultural Research Administration - Contd. XIV
Bureau of Entomology and Plant Quarantine:

\$26,420

- A. To control insect pests which limit production

Office of Solicitor:

33,050

- A. Provide legal services relating to the Emergency Rubber Project

Total Facilitating Services

1,048,470

GRAND TOTAL EMERGENCY RUBBER PROJECT

56,000,000

Plan of Work: Primary responsibility for developing and executing the Emergency Rubber Project has been delegated by the Secretary of Agriculture to the Forest Service. The Forest Service has set up the Project as a separate unit within the bureau with a division in the Washington office and a Director in charge of the guayule field work in Los Angeles, California.

Other Department bureaus; namely, the Bureaus of Plant Industry, Agricultural Chemistry and Engineering, Entomology and Plant Quarantine, and Office of Solicitor are actively and effectively cooperating in their particular fields of endeavor. Personnel of these bureaus are assigned to work with the field organization of the Forest Service supplemented by work at other field stations and laboratories.

GUAYULE

The field headquarters organization is comprised of personnel recruited from the Forest Service, other governmental organizations and private industry. Nurseries and plantation areas are supervised by experienced competent men through district offices.

Nurseries established near Salinas, Indio, and Oceanside, California, are growing seedlings. Nursery beds, 400' x 4' are laid out with intervals between beds to permit use of equipment, and windbreaks similar to snow fences are set up at regular intervals where necessary, to prevent the wind from scattering the minute seeds. Nursery irrigation is provided by overhead irrigation systems.

Standard agricultural equipment is utilized in all nursery work whenever possible in addition to specialized equipment developed for particular operations. Weeding must be done largely by hand labor. Seed is collected by hand and machinery in nursery beds and plantations. Special treatment and handling of seed is necessary prior to storage and sowing. This is accomplished in specially constructed treating and storage facilities.

Seedlings are pulled by a combination of machine and hand labor, packed in boxes with moss and transported to destination by trucks or common carrier.

Plantation acreage is acquired under lease by a land-acquisition group. The soil is prepared for planting either by the Forest Service or under contract with local farmers. Seedlings are planted by a specially designed planting machine. Cultivation is done with agricultural cultivating equipment drawn by tractors supplemented by some hand-hoeing in the rows. As much work as possible is contracted to farmers.

Temporary labor (including women) will be recruited from all available sources. Housing facilities for single men and for seasonal laborers' families will be constructed adjacent to planting areas.

OTHER SPECIES

Experimental plantings of goldenrod, cryptostegia, and Russian dandelion will be maintained and extended as necessary. Surveys and investigations to determine suitable soils, climate, cultural practices and protection of these species will be continued, and investigations to develop agricultural machinery for their planting, cultivation and harvesting will be carried on to an extent commensurate with the progress in cultivation of these species for rubber production on an extensive scale. Investigations to develop and perfect processing methods for recovering rubber will be carried on sufficiently to produce satisfactory methods or a determination that continued work in the light of all related factors is no longer justified.

ACCOMPLISHMENTS TO DECEMBER 31, 1942

During the past ten months the following action has been taken with respect to the rubber production program authorized by the Act of March 5, 1942.

The properties of the Intercontinental Rubber Company in California and the use of their patents and processes for growing guayule and extracting rubber therefrom have been acquired; 12,000 nursery beds, each 400' x 4', have been constructed, irrigation facilities installed and sown to guayule and over 300,000,000 seedlings therein are now being planted on some 32,000 acres of field plantations on leased land, mostly irrigated. Approximately 1,000 acres were planted last spring with seedlings acquired from the Intercontinental Rubber Company.

A number of test plantings and other related investigations to determine suitable guayule lands have been established in Texas, New Mexico, Arizona, California, and Mexico.

The Bureau of Plant Industry and Bureau of Agricultural Chemistry and Engineering have undertaken projects designed to facilitate and

expedite the production of rubber. The Bureau of Entomology and Plant Quarantine provides services needed to protect plants against damage or destruction by insects.

The large unexpected seed harvest (about 80 tons) made possible the expanded program recommended by the Baruch Committee, and approved by Mr. Donald Nelson, Chairman of the War Production Board. This expansion provided for establishing additional 31,000 nursery beds to supplement the 12,000 at Salinas. Of these 31,000 seedbeds, 20,000 are installed in southern California, with the view of sowing them twice a year for annual production capacity equivalent to 40,000 beds. As a result of delayed authorization to start the project, time required to get priorities, delays on shipment of supplies and equipment, shortage of reliable manpower, and similar adverse factors, southern California seedbeds were not completed until the winter weather was upon us. The cool weather had a deterrent effect on seed germination and growth in the 8,000 beds sown and that sowing has been stopped until warmer weather. It is hoped that this loss of time can be partly overcome by shortening the growing period in the nursery, but there will be an unavoidable delay in accomplishing the 1943 planting program. Work on an additional 11,000 beds is now under way.

The exact effect of the failure to get an over-winter crop of seedlings in southern California nurseries on the planting program of 1943 and the rubber harvest beginning in the fall of 1944 cannot be foretold now. The anticipated rubber yield in the 1944-45 harvest of 33,000 tons will be lessened by an undetermined amount and should be somewhere between 13,000 and 33,000 tons.

Subject to this appropriation there will be established during the winter of 1943-44, 176,000 acres of plantations, estimated to provide from 70,000 to 80,000 tons of rubber in the harvest of 1945-1946.

If the project were placed on a continuing basis after fiscal year 1944, with no additional nursery installations, the annual rubber yield should be between 70,000 to 80,000 tons.

All rubber yield estimates and many cost figures are based on the best data available, but cannot be assured in the absence of large-scale experiences on which to rely.

GOLDENROD

The goldenrod rubber production program has been confined to experimental work developing methods of propagation, planting and cultivation and the extraction of rubber from the leaves.

Planting material of the best strains now totals 150 acres near Savannah, Georgia. Studies on small plots indicate that 50 to 100 pounds of rubber per acre may be obtained in the first year after planting, and these yields may be doubled if not harvested before the end of the second year.

Tests being conducted to devise practical methods of extracting rubber have resulted in a definite improvement in the quality of the product. Studies are also being made to devise methods of harvesting goldenrod and methods of mechanical planting and cultivation, and to determine costs on an enlarged production program in the south coastal area of the United States.

KOK-SAGHYZ

The Russian dandelion, Taraxacum kok-saghyz, is reported to be the most promising rubber-bearing plant developed for large-scale production by the Russian Government. Receipt of seed of this plant from the Soviet Union made it possible to start investigations of kok-saghyz possibilities in this country.

The first two shipments of seed, totaling about 550 pounds, were received by air from Kuibishev, Russia, May 8 and May 20, 1942. With this seed cooperative spring test plantings were initiated immediately with twenty-seven state agricultural experiment stations in twenty-five northern states; in Alaska, with eight other research agencies, and with the Canadian Department of Agriculture at a number of agricultural research stations in that country. Test plantings also are being made by the Bureau of Plant Industry at the Horticultural Research Center near Beltsville, Maryland.

In addition to the seed allotted for the cooperative test plantings, 250 pounds were planted by the Forest Service for larger field tests and for seed production. Thirty-five acres were planted at Cass Lake, Minnesota; 22 acres at Manistique, Michigan; 8 acres at Butternut, Wisconsin; and 10 acres each at Missoula and Miles City, Montana.

On August 12 a boat shipment of 3-1/2 tons of kok-saghyz seed, long in transit, was received in Washington. This quantity of seed now assures the possibility of initiating extensive field plantings as soon as the information regarding areas in which this crop can be grown best and the methods for propagating it can be learned from the test plantings made in 1942. Arrangements are being made for fall test plantings by 44 state agricultural experiment stations. About 40 acres will also be planted at Forest Service nurseries in the South to test the possibilities there, particularly for seed production.

A cooperative field laboratory has been established at St. Paul, Minnesota, and the work of gathering information from the experimental tests and of selecting high-yielding strains is in progress. Steps also are being taken to mechanize the production of kok-saghyz to reduce the hand-labor usually required for the culture of this crop. In this connection, devices for picking the seed mechanically and for digging the roots are being studied. Roots from present crop are being shipped to the Philadelphia laboratory of the Bureau of Agricultural Chemistry and Engineering for tests of methods of extracting rubber.

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CRYPTOSTEGIA

No cultivation program has been undertaken by the Emergency Rubber Project. Laboratory studies of extraction processes have been undertaken. To date no satisfactory large-scale commercial extraction process from harvested plant material has been developed.

RABBITRUSH

Specimens of the most promising of this species were collected and rubber extraction tests indicate that further work thereon is considered inadvisable.

PASSENGER-CARRYING VEHICLES

The recommended authorization for the purchase of passenger-carrying vehicles from the Emergency Rubber Project appropriation for the fiscal year 1944 is \$74,700 at an estimated average cost of \$900 each. This will provide for 83 vehicles in addition to the 91 now on hand.

The additional vehicles are needed to provide a means of transportation to areas which cannot be reached by common carrier. Guayule nursery and planting areas in California now extend from the north central part of the state to the Mexican border. Nursery and planting areas are also being established or proposed in Arizona, New Mexico, Texas and old Mexico.

While the vehicles will be needed to transport technical and administrative officials between headquarters, districts and projects they will also be urgently needed to furnish transportation for reconnaissance, soil survey and land acquisition employees. A total of 194,000 gross acres must be acquired for 1944 plantations and additional land surveyed for subsequent plantings. The acreage objective in one planting area in California was 12,000 acres. Land reconnaissance and soil surveys had been under way shortly after the project was authorized. As of October 12, 1942, 170 contacts had been made by the land acquisition group and 10,835 acres were actually under lease. The average acreage per contact in this area was 64 acres. On the basis of this average it would be necessary to make approximately 3,000 contacts by the land acquisition group in addition to the many other preliminary trips such as general reconnaissance, intensive land survey, checking land titles, subsequent inspections and kindred activities.

COOPERATIVE FARM FORESTRY

Appropriation Act, 1943	\$700,000
Proposed transfer in 1944 estimates to:	
"Salaries and expenses, Office of Secretary of Agriculture"	-2,000
Total available, 1943	698,000
Budget estimate, 1944	696,168
Decrease (travel funds returned to surplus)	-1,832

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Cooperation with States in the procurement, production, and distribution of forest-tree and shrub seeds and plants for farmers (Forest Service):				
Under Clarke-McNary Act, section 4	\$83,520	\$83,700	\$83,700	- - -
Under Norris-Doxey Act	37,300	39,300	39,300	- - -
2. Cooperation with States for extension activities in developing farm forestry (Extension Service):				
Under Clarke-McNary Act, section 5	62,312	65,100	65,100	- - -
Under Norris-Doxey Act	39,422	41,739	41,739	- - -
3. Cooperation with States in carrying out farm forestry operations, including intensive projects and technical service to farmers and to legally competent and adequate organizations of farmers:				
Under Norris-Doxey Act:				
Forest Service	21,271	22,031	22,031	- - -
Soil Conservation Service	122,102	127,547	127,547	- - -
Total Project 3	143,373	149,578	149,578	- - -
4. Farm forestry investigations (Forest Service):				
Under Norris-Doxey Act	19,746	20,000	20,000	- - -
5. Prairie States Farm Forestry (Forest Service, 1942; Soil Conservation Service, 1943):				
Under Norris-Doxey Act	209,989	74,800	- - -	-74,800 (1)

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
6. Assistance to farmers in harvesting, marketing and utilization of farm wood products (Forest Service):				
Under Norris-Doxey Act	- -	221,951	296,751	+74,800 (2)
Covered into Treasury in accordance with Public Law 674	- -	1,832	- -	-1,832
Unobligated balance	102,338	- -	- -	- -
Total estimate, 1944 and comparable amounts 1943 and 1942:	698,000	698,000	696,168	-1,832

INCREASES OR DECREASES

The following adjustments are made between the projects of this item:

(1) A decrease of \$74,800 in the "Prairie States Farm Forestry Project" since this activity is to be discontinued at the end of the fiscal year 1943 and is to become at that time a part of the Soil Conservation Service program of assistance to soil conservation districts.

(2) An increase of \$74,800 under the project "Assistance to Farmers in Harvesting, Marketing and Utilization of Farm Wood Products" for furnishing assistance to more farmers in harvesting, marketing and utilization of farm wood products, particularly those needed in conduct of the war.

General: Increased quantities of forest products are needed to meet war needs. The farm woodlands of the Nation are making a notable contribution and can furnish more. Too often logging operations are on a "clean sweep" basis, completely destroying the woods. It is entirely feasible for cutting operations that remove needed products to leave the woods in productive condition and imperative that they do so if the basic resource is not to be impaired. The activities of the Cooperative Farm Forestry Program are designed to help farmers get out needed timber and other products by use of methods that will retain and build up their woodlands as producing units. The estimate for carrying on Cooperative Farm Forestry work provides for general educational work, production and distribution of forest planting stock, research, intensive woodland management demonstration projects, and assistance to farmers in harvesting, marketing and utilization of farm wood products.

Objective: To provide for cooperation being requested by states in the furtherance of farm forestry; specifically, to aid states: (1) to produce or procure and distribute forest tree planting stock to farmers; (2) to provide supervision and cooperation in extension activities in farm forestry; (3) to facilitate improvement in the development and management of farm woodlands as an integral part of the farming business through application of management plans on representative groups of farms in the various farm forestry problem areas,

including the furnishing of technical services to farmers in the management of woodlands; (4) to make investigations of farm forestry problems; and (5) to furnish assistance to farmers so they may obtain a fair price for their farm woodland products and not destructively over-cut their woods, particularly in helping to meet the war demands for forest products, and so established plantations may be maintained. (Project 5 is being made a part of the Soil Conservation Service program of assistance to soil conservation districts in 1944.

The Problem and its Significance: The preservation and development of the producing ability of farm woodlands through better management is fundamental to sound farm management. Nearly one-quarter of all the land in farms, and over three and a half million farm families are involved. About 235 million acres of farm land are believed to be best suited for permanent use as farm woodlands. Approximately 185 million of these acres are now growing trees and 50 million acres should be planted. Much of the area now forested is sparsely stocked with trees or supports trees of inferior quality. Under present woodland management practices the stand and quality of trees on most of these lands is inadequate to yield the continuous income which should rightly come from this farm resource.

- Improved land use requires that large areas of farm lands be converted from cultivated to some other crop. In many cases the production of woodland crops is the best use for such lands. Some 15 million acres in the South, which were formerly or are now used for cotton production, are in large part best adapted for the production of forest products. In the central west and prairie-plains regions, the demonstrated value of protective plantings, especially during the recent years of drought and consequent hardships, has greatly increased the demand for trees. There is an outstanding need for shelterbelts and farmstead plantings to conserve soil and moisture, protect crops and livestock, provide fuel and wood for farm use, and otherwise make the region a better place to live in. It is cases such as these that, in the aggregate for the United States as a whole, make up the 50 million acres of farm land which should be planted to woodland in the best interest of farms and farmers as well as of the general public welfare. In addition, some of the existing 185 million acres of farm woodlands should be interplanted to bring them up to their production capacity. Every year that tree planting is delayed on such areas represents a material loss to our national productive capacity and income.

Under intensive farm woodland management the value of farm woods products which can be harvested annually can be increased to double the quarter billion dollars worth cut in 1929 (the last year for which figures are available). The cash income to farmers from the sale of farm woodland products is susceptible to a still greater increase if the farmers themselves will log and haul their woodland crops to points of shipment. Development of better marketing methods and facilities will also add considerable to the value of products sold.

Improved markets for lumber and other farm woodland products as a result of war needs are resulting in overcutting in many parts of the country. In many

localities the woods are clear-cut and thus destroyed for future production. This problem is immediate and important and its early alleviation is imperative if the farmwoods are to remain as producing parts of farms.

Farm woodlands should contribute to conduct of the war but not by the destruction of and not at the expense of productive capacity. The farmers need information and assistance of a kind which will make them confident that putting into effect such recommendations will result in benefit to themselves, as well as the woodlands sources. For example, the proper appraisal as to quantity and value and the marketing of farmwoods products is a field about which the average farmer has little information as compared to his knowledge of the appraisal and marketing of grain, livestock, and other farm crops. In many sections of the country trees suitable for making saw-logs, piling, and pulpwood are being sold for a fraction of their real value and at a considerable loss to the future producing power of farm woodlands because farmers lack knowledge of the quality and value of various trees and the products that may be obtained from them. They are unfamiliar with proper harvesting and marketing procedures. The operations of pulpwood users, particularly in the South, emphasize farmers' need for such information.

General Plan: The Federal cooperation under this appropriation, in the production and distribution of forest planting stock conducted by the Forest Service, is provided to the state agencies (state forestry commissions, departments, etc.) by means of reimbursement after the work has been performed and paid for by the state in accordance with a previously agreed upon plan. 42 states and 2 territories are actively cooperating in this undertaking. Assistance to the individual states in the production or procurement of planting stock is limited to forest planting stock for field planting. No ornamental or shade trees are produced or distributed under the program. In addition to helping supply the regular farmer demand, the facilities of the project are available to the states for participation in tree-planting programs in connection with soil and water conservation work, flood control work, and other tree-planting activities.

Extension Service activities under this appropriation are conducted in cooperation with State Agricultural Extension Services, as a means of reaching the maximum number of farmers. Federal funds are matched by at least an equal amount of state funds expended for the same purpose, thereby doubling the effectiveness of federal expenditures.

Assistance to farmers in bringing about the improvement of farm woodlands as continuous income producers requires the integration of research, education and technical assistance to individual farmers in a concerted effort. Interested state forestry departments and state agricultural colleges in each of 45 states and one territory in cooperation with Department representatives, have organized for such an attack on the farm forestry problems. The state programs outline the need for sound farm woodland management, the best methods of harvesting, manufacturing, and marketing the products from farm woodlands; and for the intelligent integration of these processes with the demand for farm woodland products. Approximately 150 forestry demonstration projects are estimated to be needed to illustrate the effect in the woods of applying good

forestry practices. There are 52 such projects under way in 37 states and requests from states for assistance in establishing approximately 40 additional projects have been received.

Research work is carried on by the Forest Service in cooperation with State Agricultural Experiment Stations which supply contributions at least equal in value to the Federal allotments. Proposals for cooperative research projects are submitted by the states covering those subjects of most significance to their local forestry problems.

At least 3,500,000 farms include woodland acres capable of producing forest products. Most of the farmers on them are in need of assistance in the management, harvesting, utilization, and marketing best suited to their particular woodlands. The Department is extending aid and assistance on a broad base, so farmers in areas of heavy timber demand may be given technical aid at the time they undertake cuttings in their woodlands.

An increasing number of farmers are realizing the need for improvement in the management of their woodlands and for organized marketing facilities in order to increase, stabilize, and perpetuate the production of marketable farm woods crops. Particularly in connection with logging and other operations to supply products needed for war purposes, farmers are seeking the aid of forestry services to assist them in attaining these objectives. The funds requested under this item will be used to help furnish this aid.

WORK UNDER THIS APPROPRIATION

Cooperation with states in the procurement, production and distribution of forest-tree and shrub seeds and plants for farmers (Forest Service): Under authorization of Section 4 of the Clarke-McNary Law, and the Cooperative Farm Forestry Act, Federal assistance and cooperation in the production and distribution of forest planting stock were continued with 42 states and 2 territories. Stock distributed was used for establishing wind-breaks and woodlands upon denuded or non-forested farm lands.

During the calendar year 1941 over 97 million forest tree seedlings were produced and sold to landowners by cooperating state forestry agencies, at less than the cost of production and distribution.

Georgia led all other states in the number of forest trees distributed under this program with over 10 million. Mississippi and South Carolina each distributed over 9 million and New York distributed over 7 million.

The states devoted \$411,609 of state and private funds to this cooperative project last year and \$123,000 was provided by the Federal Government.

Cooperation with states for extension activities in developing farm forestry (Extension Service): Forestry extension work was carried on during the year in the forestry counties in 48 states, Alaska, Hawaii, and Puerto Rico, through the aid of 69 extension foresters, 2323 county agents,

15,039 local leaders, and 23,156 4-H Club members. In addition, 31,295 4-H Club members not in special forestry projects participated in forestry activities. The educational work of state extension foresters and county agricultural agents, has been a means of increasing a recognition by farmers of the substantial contribution that woodland can make to the farm income and inducing farmers to adopt improved management practices to keep farm woodlands in condition for continuous production.

Assistance is being furnished state and county War Boards. In cooperation with the War Production Board, Office of Price Administration, Office of Solid Fuels Coordination, and Office of Petroleum Coordination material has been developed of direct interest to farm woodland owners. Through such work as preparing and distributing forestry information, demonstrating woods practices, organizing for group action, and assisting with forestry planning, many farmers have received practical assistance on woodland management problems.

Approximately 7,700 farmers adopted improved practices in the production of naval stores; 3,739 adopted better practices in the production of maple sugar and sirup; 9,168 were assisted in timber estimates and appraisal work; 24,810 followed extension recommendations in the preservation of wood; and 22,382 were given help in the marketing of forest products.

As a part of the regular extension educational program timber-marketing work was carried on including the preparation of marketing reports and lists of buyers of timber products. These proved helpful to woodland owners who generally are not familiar with timber-marketing conditions.

To protect rural resources against fire, extension foresters cooperated in measures for the safeguarding of woodlands, farm buildings, storage bins, and crops. In some states extension foresters were designated as leaders of rural fire-control projects for the state extension services.

Because of the water and rail transportation situation and the greatly expanded industrial requirements for coal and oil, it was considered advisable, particularly in the New England states, to encourage wood fuel production to prepare for possible shortages of imported fuel. One of the first programs of this kind, "Cut a Cord for Victory," was launched by the extension forester in Connecticut with 4-H Club members. In New Hampshire, state and county wood fuel committees were set up in cooperation with county chairmen of civilian defense and county war boards. The local wood fuel committees, with county agents cooperating, presented the fuel situation to farm people and encouraged the production of wood for fall and winter use. By producing fuel wood for home use and sale, farmers are helping to conserve coal and oil needed for the war industries thereby releasing transportation for war shipments and assisting in averting dislocations and crises on the home front. Farmers are cutting millions of feet of timber from farm woodlands for ship building, barracks, military crating, crossties, gunstocks, and pulpwood which has numerous war uses. Along with the producers of airplanes and tanks they are having a vital role in developing the swelling tide of military production.

In addition, during the year 54,053 farmers reforested new areas by planting with small trees. Some 29,500 farmers planted windbreaks or shelterbelts, while 31,089 planted trees for the control of erosion and 49,293 practiced selection cutting.

Cooperation with states in conducting intensive farm forestry demonstration projects (Forest Service and Soil Conservation Service): Community-size project demonstrations of the management of farm woodlands to produce continuous crops of forest products require necessary research, education and technical assistance to farmers. The growing shortage of wood products, especially lumber, has created an acute need for assistance to farmers in their efforts to help meet the Nation's need for wood products and at the same time cut the farm woodlands so as to leave a timber growing stock for succeeding crops. The intensive projects provide a means for making technical service available and at the same time afford a good opportunity to get much needed information on the results of properly conducted cutting operations.

On these projects, established in cooperation with state agencies to develop factual information on the value of well-managed farm woodlands, material assistance has been given cooperating farmers in applying good management and marketing practices. A project forester is assigned to each project. It is his job to assist cooperating farmers in the management of their woodlands.

Forty-five states and one territory have submitted state programs. Fifty-two projects have been established in 37 states, of which 42 are farm forestry projects for which the Soil Conservation Service is responsible and 10 are forest farming projects for which the Forest Service is responsible. Of these, four farm forestry and one forest farming projects were established during the 1942 fiscal year.

Twenty-seven states have one farm forestry project each, six states (California, Connecticut, Indiana, Minnesota, Mississippi and Missouri) have two farm forestry projects each, and West Virginia has three.

At the beginning of the fiscal year 1942 there were nine forest farming projects in operation, one each in the States of New York, New Hampshire, Alabama, Florida, Georgia, Texas, Louisiana, Maryland and Vermont. During the year one new project was established in Tennessee.

Following is a statistical summary showing the accomplishments of intensive forestry demonstration projects for the fiscal year 1942:

Item	Type of Project		Total
	(a) Farm Forestry	(b) Forest Farming	
1. Number of projects as of June 30, 1942	42	10	52
2. Projects established during fiscal year 1942	4	1	5
3. Cooperative projects (50 percent or more of expenses paid by state)	16	9	25
4. Partly cooperative (state pays less than 50 percent of expenses)	10	- -	10
5. Federally administered projects (state offsets other than cash)	16	1	17
6. Number of states cooperating	- -	- -	37
7. Number of states with one project	- -	- -	23
8. Number of states with two projects	- -	- -	13
9. Number of states with three projects	- -	- -	1
10. Number of farms having farm woodlands planned	461	69	530
11. Acres farm woodlands planned	39,246	15,633	54,879
12. Acres of timber cruised	18,838	15,457	34,295
13. Acres planted (farm woodlands)	1,421	338	1,759
14. Acres planted (windbreaks)	260	- -	260
15. Planting stock furnished by Government (No. trees)	733,942	30,050	763,992
16. Planting stock furnished by cooperators (No. trees)	730,602	224,500	955,102
17. Fence constructed (rods)	26,873	1,620	28,493
18. Number of farmers accomplishing			
a. Planting	368	48	416
b. Cutting in woods	520	100	620
c. Other work	210	81	291
19. Sawtimber cut (M. ft. B.M.)	6,029	5,902	11,931
20. Poles and piling (linear feet)	133,928	60,285	194,213
21. Cross ties	3,654	11,064	14,718
22. Pulpwood (standard cords)	551	2,381	2,932
23. Fuel wood (standard cords)	8,891	1,948	10,839
24. Fence posts	58,934	27,376	86,310

Since the intensive forestry projects constitute a program to procure essential data over a period of time to show the value of well-managed farm woodlands, there will be no significant changes in emphasis from the program of work carried on during the 1942 fiscal year, except that project foresters have been authorized to furnish technical assistance to farmers within existing project areas who are getting out forest products needed in the war effort but who do not wish to keep detailed records on their operations.

In addition to the farmers given assistance in carrying on farm woods operations, the projects benefited the operators of many times that number of farms by serving as readily available examples of proper practices to follow. They were used by extension foresters and county agents in holding demonstration meetings to explain to other farmers in the communities how woods products should be cut and marketed.

Farm Forestry investigations (Forest Service): Research in farm forestry furnishes technical information as a base for the profitable sustained yield management of farm woodlands. Its importance is strikingly brought out as war demands for forest products increase. This work is done in cooperation with State Experiment Stations which supply state funds or their equivalent in amounts at least equal to Federal allotments. Such cooperative research projects were submitted by State Experiment Stations for the fiscal year 1942 with matching funds or their equivalent to equal four times Federal funds available. Seven projects were in operation during the fiscal year 1942 and are being continued into fiscal year 1943. Current accomplishments and programs under this unit are illustrated by the following examples:

Connecticut: This project, a study of the use of wood as fuel, is of vital importance in the Northeast now that a fuel shortage exists there. A wood burning stove has been adapted to utilize low grade or other inferior types of wood and at the same time produce more and steadier heat with less fire hazard than with the usual type of stove. The work is being continued to develop utilization of low grade wood material for fuel in industrial heating installations. Various types of processing are being developed such as "hogged wood", etc.

Ohio: The project has been assisting the Ohio Woodland Survey to locate and determine the volume of useful timber and to locate and determine the capacity of wood-using plants in each county. During the last two years the project has made possible the publication of 12 county reports and surveys for 30 additional counties. This information is important and requests have already come in for information on the availability of woods of several species needed in the war program.

Michigan: As a result of the work on this project, a sawmill operators' association, made up of operators in the lower peninsula, has been incorporated. Cooperation with this organization may make possible the use of farm timber by local wood-using industries. Efforts are being made to relieve the fruit storage and shipping problem by devising new containers using lower grades of local woods. This project is attempting to help overcome local lumber shortages caused by war industry priorities.

Minnesota: Farmers throughout southern Minnesota are faced with an increased need for small farm buildings at a time when the WPB has frozen construction supplies. Past studies have demonstrated the practicability of greater home use of native hardwoods. A woodworking cooperative has been organized in which about 150 farmers are participating and experimental work is moving :

forward on the piling of mixed hardwood lumber of mixed lengths to facilitate seasoning. The forester assigned to this project is cooperating in adapting plans for a variety of farm buildings to make use of hardwoods.

Prairie States forestry projects (Soil Conservation Service): The work of establishing shelterbelts in cooperation with the farmers and other Federal and state agencies was continued in all six states of the prairie-plains region. Accomplishments in 1942 were as follows:

Miles of new field shelterbelts planted	1,750
Number of new farms served	2,836
Number of trees planted in field shelterbelts	20,444,800
Number of acres of other types of protection plantings (highway, livestock, feed lot, garden, school ground, blow-out, and other)	924
Number of trees in other types of planting	525,800

Since 1935 the project has planted a total of 18,600 miles of field shelterbelts on 30,223 farms and over 95 percent of these shelterbelts are being maintained by the farmers and progressing satisfactorily toward complete establishment. Over 217 million trees, including replacements, have gone into the planting of the shelterbelts. Most of the trees for planting have been produced in Government operated nurseries of which there were eight as of June 30, 1942.

At the beginning of the fiscal year 1943 the project passed from Forest Service administration to Soil Conservation Service administration in order that all tree planting conservation activities in the plains region would be under one agency.

The amount of Cooperative Farm Forestry funds available for the Shelterbelt work in 1943 is only enough to liquidate stock now growing in the nurseries. Shelterbelt planting will be continued as needed and insofar as resources will permit, along with other planting on farm and ranch land as a part of the regular Departmental assistance to Soil Conservation districts through the Soil Conservation Service.

Assistance to farmers in harvesting, marketing and utilization of farm wood products (Forest Service): Farmers need technical assistance in the harvesting, marketing, and utilization of woodland products to assure that the critical wood materials needed by war industries are harvested without destructive cutting and that the farmer receives full value for the products marketed.

There are over 185,000,000 acres of farm woodland in the United States, which is nearly one-third of the country's total forest area. Of this amount, approximately 140,000,000 acres are classified as being capable of producing continuous crops of forest products and should be managed for this purpose. The balance, or 45,000,000 acres, is chiefly of value for watershed and wind protection purposes and is a relatively minor factor in the production of wood products other than fuel wood, fence posts, etc., for home use on farms.

The 140,000,000 acres of productive farm woodlands are strategically located with respect to markets and means of transportation for supplying an important part of the forest products normally used in industry. Considerable production of critical wood products is coming from them and must continue to come from them during the war since they constitute an important source of such materials.

Farmers seldom realize the destructive effects of overcutting woodlands or of the small benefits realized from such unnecessary practices. Likewise, they usually are unaware of the increased returns resulting from good management. The Nation can ill afford to lose a large part of its wood resource through destructive practices.

Many farm woodland cutting operations have been on a "take everything" basis and sales too often have been for lump sums which are generally far below the true value of the timber sold. Notable exceptions to this general rule have been cases where the farmers have been able to avail themselves of advice and assistance of foresters. For example, a farmer in Florida recently purchased 60 acres of land for \$660. He was offered \$450 for the timber on this land and for some worked out pine on an adjoining 20 acres. The project forester advised the farmer to delay the sale until a cruise could be made of the timber. The cruise showed the presence of 120,000 board feet of old growth pine and cypress worth \$10 per thousand or \$1,200. The farmer, however, could not resist a bid of \$900 from the same buyer who had originally bid only \$450. Shortly thereafter the farmer was offered \$1,200 by another buyer. Even so, the farmer profited to the extent of \$450 by following the advice of the project forester and under the condition of the sale a growing stand of trees was left on the land for a new crop of timber.

The problem is to reach the 3,000,000 odd farmers owning woodlands and in need of technical assistance in the type of management, harvesting, utilization and marketing best suited to their particular woodlands. To provide urgently needed marketing and management aid to most farmers in the principal woodland regions, approximately one forester to about 4,000 farms is needed.

In order to reach as many farmers as possible needing and requesting forestry aid, the Department is establishing this service within the states where conditions, with respect to overcutting and absence of adequate management, are critical. The locations of such areas are determined in cooperation with appropriate state agencies and others having intimate knowledge of the woodland conditions.

The funds requested under this item will be used to employ foresters to work with farmers in their woodlands in the harvesting, utilization, and marketing of their forest products. This service will include aid in timber appraisals, marking trees for cutting, proper logging practices, specifications for special products, and selling procedures which will assure a proper market for the product at a just price. This is an "on the ground" service streamlined for volume of application and available throughout the project areas to all farmers needing and desiring such assistance.

An increasing number of individual farmers and groups of farmers are realizing the need for better management of farm woodlands and for organized marketing in order to raise, stabilize, and perpetuate the production of marketable farm woods crops. This has come about largely through educational efforts but it is impossible to provide the necessary follow-up with the small number of foresters now available. The educational activities develop farmer interest in forestry and, if follow-up technical service is provided, much more progress is made.

Up to December 1, 1942, a total of 51 project areas in 20 states had been provided with foresters. Negotiations were in process with 20 additional states. It is expected that approximately 80 project areas will be receiving technical assistance by the end of the fiscal year.

COMMODITY CREDIT CORPORATION

ADMINISTRATIVE EXPENSES (a)

Appropriation Act, 1943	\$3,513,498
Second Supplemental National Defense	
Appropriation Act for 1943	625,000
Total available, 1943	4,138,498
Budget estimate, 1944	4,500,000
Increase (including decrease of \$9,235	
travel funds returned to surplus)	<u>+361,502</u>

(a) The amounts authorized for this purpose are made available from the capital funds of Commodity Credit Corporation.

INCREASES OR DECREASES

The increase of \$361,502 in this item for 1944 consists of a decrease of \$9,235 in travel funds (returned to surplus in 1943) and:

(1) An increase of \$370,737 (including a net increase of \$798 for transfer to the Treasury Department) to carry on a full 12-month basis the additional emergency programs initiated during the fiscal year 1943 and to provide for necessary expansion of such activities.

General: Pursuant to executive orders, the Commodity Credit Corporation is engaging in an extensive foreign purchase program, in programs designed to expand the production and processing of domestic vegetable oil-bearing seeds, oilseed products, and other essential agricultural commodities, and in programs designed to maintain needed production of agricultural commodities.

Objective: Objectives of the emergency programs administered by Commodity Credit Corporation are: (1) to increase the supply of agricultural commodities essential to the prosecution of the war; (2) to carry out agreements made at the Conference of Foreign Ministers at Rio de Janeiro whereby this country pledged to support the economies of the Latin-American countries which might be jeopardized by the loss of normal export markets as a result of the war; and (3) as part of the economic stabilization program, to assure fair prices to producers, processors and consumers while maintaining needed production of agricultural commodities.

The Problem and Its Significance: The increasing demand for certain agricultural commodities created by the needs of the armed services and of our Allies, and increased civilian purchasing power, together with the cutting off of certain normal import sources of foreign agricultural products, particularly in the Far East, have created serious actual and potential shortages. In some instances existing processing facilities are inadequate to process the increased production necessary to overcome these shortages. The problem, then, is (1) to maintain through price supports adequate production of essential commodities normally produced in sufficient quantity; (2) to provide

incentives to increase production of commodities formerly imported, and of substitute commodities; (3) to increase imports of agricultural commodities needed in the war effort from such foreign sources as are still available; and (4) to insure adequate processing facilities.

Plan of Work: The many varied types of commodities involved, the importance of preserving the price ceilings, and the necessity for preventing the disruption of existing trade channels have made it necessary for Commodity Credit Corporation to develop a variety of procedures and methods of operating these emergency programs. In order to carry out some of the emergency programs, the Commodity Credit Corporation has established a Foreign Purchase Division, a Hemp Division, and a New York Regional Office, and has sent representatives to Latin-American countries. Other new programs are being administered by existing offices of the Corporation but as operations expand it may be necessary to establish additional divisions. Much of the work in connection with the functioning of certain emergency programs is being performed by existing Federal and commercial agencies, by cooperative associations which have contracted with Commodity Credit Corporation to act as agents of the Corporation for that purpose, and by an emergency group of importers which has been established under the direction of the Corporation to assist in the Foreign Purchase Program.

Among the emergency programs initiated or expanded during the fiscal year 1943 are the Foreign Purchase Program, the Hemp Program, and a number of other programs designed to maintain production or to stimulate increased production and insure adequate utilization of processing facilities. The Foreign Purchase Program is an extensive program for the purchase of many foreign agricultural commodities, including coffee, cocoa, alcohol, and fats and oils, initiated under delegation of authority from the Board of Economic Warfare, which had designated Commodity Credit Corporation as the exclusive agency of the United States for the purchase and importation of most foreign agricultural commodities. The Hemp Program is a comprehensive program undertaken for the purpose of producing and processing a large quantity of domestic hemp fiber to offset the loss of imports of foreign fiber. Illustrative of other programs is the domestic Vegetable Oils Program - a price supporting, processing, and distributing program for soybeans, cottonseed, peanuts and flaxseed. Through loans to or purchases from producers, processors, refiners, crushers, and bleachers, this program is designed to assure adequate production by supporting prices, to assure adequate utilization of processing facilities, and to make available to livestock producers increased supplies of soybean, cottonseed, flaxseed, and peanut meals.

As the demand for certain commodities increases and as these programs develop to meet their objectives, many of them will have to be enlarged and expanded. Much of the work during the current fiscal year must, of necessity, be of a preliminary nature. For instance, in the Hemp Program, its purpose during the calendar year 1942 was to assure the production of 35,000 acres of hempseed. This seed will be distributed, and during 1943, the purpose of the program will be the production of 300,000 acres for hemp fiber, in addition to 50,000 acres for seed.

In order to process the fiber, 71 hemp mills are to be constructed. The planting of the seed, the processing of the fiber and the sale of the finished cordage will be under the direction of Commodity Credit Corporation. Similar expansion of some of the other programs will also be necessary in order for the objectives to be attained.

(2) An increase of \$36,245 for transfer to the Office of the Solicitor, Department of Agriculture, for additional legal services arising out of the increased activities of the Corporation.

CHANGE IN LANGUAGE

The estimates include a proposed change in the language of this item as follows:

Administrative Expenses, Commodity Credit Corporation, Department of Agriculture. Salaries and administrative expenses; not to exceed [\$3,513,498] \$1,500,000 of the funds of the Commodity Credit Corporation shall be available for administrative expenses of the Corporation in carrying out its activities as authorized by law, including personal services in the District of Columbia and elsewhere; travel expenses, in accordance with the Standardized Government Travel Regulations and the Act of June 3, 1926, as amended (5 U.S.C. 821-833); printing and binding; lawbooks and books of reference; not to exceed \$400 for periodicals, maps, and newspapers; procurement of supplies, equipment, and services; [typewriters, adding machines, and other labor-saving devices, including their repair and exchange] rent in the District of Columbia [and elsewhere]; and all other necessary administrative expenses: Provided, That all necessary expenses (including legal and special services performed on a contract or fee basis, but not including other personal services) in connection with the acquisition, operation, maintenance, improvement, or disposition of any real or personal property belonging to the Corporation or in which it has an interest, including expenses of collections of pledged collateral, shall be considered as nonadministrative expenses for the purposes hereof: Provided further, That none of the funds made available by this paragraph shall be obligated or expended unless and until an appropriate appropriation account shall have been established therefor pursuant to an appropriation warrant or a covering warrant, and all such expenditures shall be accounted for and audited in accordance with the Budget and Accounting Act of 1921, as amended [Provided further, That none of the fund made available by this paragraph shall be used for administrative expenses connected with the sale of Government-owned or Government-controlled stocks of farm commodities at less than parity price as defined by the Agricultural Adjustment Act of 1938: Provided further, That the foregoing proviso shall not apply to the sale or other disposition of any agricultural commodity to or by the Agricultural Marketing Administration for distribution exclusively for relief purposes, nor to

grain which has substantially deteriorated in quality or is sold for the purpose of feeding or the manufacture of ethyl alcohol, butyl alcohol, acetone, or rubber, or commodities sold to farmers for seed, and sales of cotton required in connection with the present new uses program being carried on by the Department of Agriculture: Provided further, That not more than one hundred and twenty-five million bushels of wheat may be sold for feeding purposes: Provided further, That no grain shall be sold for feed at a price less than 85 per centum of the parity price of corn at the time such sale is made].

The first change eliminates the authority for the purchase of typewriters, adding machines, and other labor-saving devices, including their repair or exchange. Specific authority for purchase of such items is not required, and authority for exchange is being contained in the Independent Offices Appropriation Bill for 1944, for the Government as a whole.

The second change eliminates the reference to rent outside the District of Columbia. Since specific authority for such rent is not necessary, the provision is considered superfluous.

The third change eliminates the limitation on the sale of Government-owned and Government-controlled stocks of farm commodities. The change is desired in order that it will be possible for Commodity Credit Corporation to make a maximum contribution to the national war effort by making readily available Government-owned stocks of commodities for feed to increase the production of meat and lard, poultry, eggs, milk, and cheese.

ORGANIZATION AND FINANCIAL CONDITION

Organization: The Commodity Credit Corporation was created as an agency of the United States on October 17, 1933, pursuant to Executive Order No. 6340, dated October 16, 1933. Its functions as an agency of the United States have been extended from time to time, and pursuant to the Act of July 1, 1941, (55 Stat. 498) these functions were extended to June 30, 1943, or such earlier date as may be determined by the President of the United States. The Corporation was made a part of the Department of Agriculture on July 1, 1939, by Reorganization Plan No. 1.

The Agricultural Adjustment Act of 1938, as amended, authorizes and directs the Corporation to make loans available to producers on the 1941, 1942, 1943, 1944, 1945, and 1946 crops of cotton, corn, wheat, rice, tobacco, and peanuts, provided that marketing quotas have not been disapproved by producers. The Act of October 2, 1942 (Public Law 729-77th Congress), provides for loans on such commodities to be continued until the expiration of the 2-year period beginning with the 1st day of January following a declaration of the termination of hostilities in the present war, and also provides for loan or purchase programs on other commodities during the same period, if the Secretary of Agriculture determines that expansion of production is necessary.

Manner in Which Loans are Made: Loans are made by the Corporation to producers and to associations of producers. More than 90 percent of the loans to individual producers are made indirectly through private lending agencies. In nearly all instances the private lending agency is the producer's local bank which makes a loan under conditions specified by the Corporation and on loan forms provided by the Corporation. The local bank (private lending agency) receives a guarantee from the Corporation to purchase the note upon demand at its face value, plus accrued interest at the rate of $1\frac{1}{2}$ percent. The difference between the rate of 3 percent charged all producers on all Corporation loans and the smaller rate of interest obtained by the private lending agencies represents the compensation of the Corporation for its operating expense.

Financial Structure: Commodity Credit Corporation has an authorized paid-in capital of \$100,000,000. In addition, it was authorized by the Act of March 8, 1938 (15 U.S.C. 713a-4), as amended, with the approval of the Secretary of the Treasury, to issue and have outstanding at any one time, notes, bonds, debentures, and other obligations not to exceed \$2,650,000,000 which are fully and unconditionally guaranteed as to principal and interest by the United States.

Capital Gains and Losses: The Act of March 8, 1938 (15 U.S.C. 713a-1, 2), as amended, provides for readjustment of the net worth of the Corporation to the amount of its \$100,000,000 capital once each year. The Act requires that the Corporation's assets and liabilities be appraised by the Secretary of the Treasury as of March 31 of each year on the basis of the cost, including not more than 1 year of carrying charges, of such assets to the Corporation, or the average market prices of such assets for a period of 12 months ending with March 31 of each year, whichever is less. Provision is also made in the Act (a) that any deficiency of its net worth under \$100,000,000 be restored by the Secretary of the Treasury, and (b) that any excess in its net worth over \$100,000,000 shall be paid into the general fund of the United States Treasury. The appraisals made by the Secretary of the Treasury, as of March 31, 1938, March 31, 1939, and March 31, 1941, disclosed capital impairments of \$94,285,404.73, \$119,599,918.05, and \$1,637,445.51, respectively, and these amounts were restored by the Treasury. The appraisals as of March 31, 1940, and March 31, 1942, showed that the net worth of the Corporation exceeded \$100,000,000 by \$43,756,731.01 and \$27,815,513.68, respectively, and these amounts have been paid by the Corporation into the general fund of the Treasury.

It may be noted that the amounts appropriated to the Corporation to restore capital impairments or that surpluses paid into the Treasury in connection with readjustments of the Corporation's capital under the terms of the Act of March 8, 1938, have no real relation to the actual losses which have been or may be incurred. They represent estimates as to what the Corporation's loss or profit would have been if all the commodities owned by or pledged to the Corporation had been liquidated at the appraised value. No actual loss is taken by the Corporation or shown on its books until the commodity has been sold for an amount less than the Corporation's investment. From October 17, 1933 to October 31, 1942, the actual losses of the Corporation have amounted to \$4,777,196.56. There is shown below a condensed operating statement covering this period.

Income:

Interest earned	\$44,664,779.52	
Other income	<u>23,664,564.31</u>	\$68,329,343.83

Expense:

Interest expense	39,267,438.17	
Operating expense	17,840,100.15	
Depreciation - Fixed Assets	<u>2,995,732.48</u>	60,103,270.80

Excess of operating income over

operating expense	8,226,073.03
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Realized losses on commodities	<u>13,003,269.59</u>
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Excess of operating expenses and realized

losses over operating income	<u>\$ 4,777,196.56</u>
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Current and Estimated Operations: Total loans and purchases of commodities as well as repayments of loans and sales of commodities during the fiscal year 1942 exceeded all previous years, and the indications are that the total volume of all transactions during the current year will be even higher. Large crops of many commodities may result in very large quantities coming under loan, but it is not anticipated that the stocks owned or controlled by the Corporation will be materially increased, since redemptions and sales are expected to be substantial. Farmers are expected to utilize commodity loans as a means of financing the holding of feed crops to meet the needs of increased livestock production, and the diversion of agricultural commodities to war uses will increase. A large part of the commodities acquired by the Corporation through its loan and purchase programs will be used to meet military and lend-lease requirements.

Loans and Commodities Owned: A statement of loans made and commodities owned by the Corporation as of November 30, 1942, appears on pages 150-153. This table shows (1) the total advances on loans, (2) the repayments, acquisitions and adjustments on loans, (3) total commodity loans outstanding, and (4) the total quantities of commodities held as collateral. There is also shown the total quantities and book values of commodities owned by the Corporation as of November 30, 1942.

Balance Sheet: The balance sheet of the Corporation, as at November 30, 1942, is shown on page 154.

WORK UNDER THIS APPROPRIATION

Objective: There is little difference between so-called "regular" and "emergency" programs of Commodity Credit Corporation as far as present objectives are concerned. Loan programs previously carried on as a part of a price stabilization program for the purpose of maintaining adequate farm income, may now be regarded as price supports to facilitate increased production of agricultural commodities needed for military, lend-lease, and civilian consumption. Reserves of food and fiber accumulated through previous loan programs are either being moved direct into war channels or being maintained against definite future needs.

Progress and Current Programs:

General: During the fiscal year 1942, the loan and purchase programs of Commodity Credit Corporation were devoted to the development of increased supplies of strategic agricultural commodities required in helping to meet the military and essential civilian needs of the United States and its Allies: to help protect the economy of Central and South American countries against wartime disruptions; to stabilize agricultural commodity prices; to assure the orderly marketing of agricultural surpluses; and to help maintain a reserve of food and fiber in the "Ever-Normal Granary." By the end of the fiscal year 1942, the emergency activities of the Corporation included programs designed to increase the supply of such essential agricultural commodities as pork, dairy and poultry products; soybeans; flaxseed, peanuts, and other vegetable oilseeds and products; ethyl alcohol, butyl alcohol, and acetone; and lumber for the production of military airplanes and gliders. New programs initiated since June 30, 1942, include a greatly enlarged program for the processing of vegetable oilseeds and oilseed products, and a program to increase the production of hemp and the processing of hemp line and tow fiber.

In its emergency activities, Commodity Credit Corporation is cooperating closely with the War Production Board, the Board of Economic Warfare, the Office of Price Administration, the Office of Economic Stabilization, the Department of State, and Bureaus of the Department of Agriculture.

The loss of normal export markets for many agricultural commodities has been offset by the movement of agricultural supplies under lend-lease commitments, the increased domestic demands created by the needs of the armed services, and by higher civilian purchasing power. However, large quantities of agricultural commodities have been placed under loan, and prices generally have remained at a higher level than they would have if price-supporting loans had not been offered. These loan stocks of cotton, grain, and other commodities now constitute a valuable reserve available under the Ever-Normal Granary program to meet wartime emergencies.

The loss of many sources of essential foreign-produced commodities and the increasing demands of the war effort, have caused shortages of many essential commodities. To meet this situation, price-supporting programs have been developed to encourage increased production of commodities formerly imported, or of substitute commodities.

The regular loan and purchase programs of the Corporation have continued to maintain an effective floor under farm prices, and have promoted orderly marketing which has enabled producers to dispose of their crops at prices approaching, and in some cases, exceeding parity. The stocks accumulated under the loan programs have enabled the Corporation to make available quantities of grain for the production of alcohol and for feed, and quantities of cotton, tobacco, turpentine, and rosin for lend-lease requirements.

COTTON

Loans on 1941 crop cotton at 85 percent of the parity price were mandatory under the provisions of paragraph 10 of Public Law 74, 77th Congress. Although the record domestic consumption, together with exports made possible through the export subsidy programs, exceeded the 1941 production by about 1,300,000 bales the loan provided needed financial assistance to farmers during the harvesting season and for the lower grades which were not readily marketable. Slightly more than one-fifth of the crop, 2,221,000 bales, was placed under the loan. Prices advanced during the marketing season and producers liquidated loans on about 1,250,000 bales of 1941 loan cotton. Cotton producers were also able during the fiscal year 1942 to realize on equities in about 2,000,000 bales which had been pledged under the 1938, 1939, and 1940 loan programs. On November 21, 1942, there remained under loan 851,000 bales of 1941 crop cotton, most of which was of grades below Middling.

Government-owned stocks were decreased by approximately 2,300,000 bales through sales programs and deliveries under lend-lease. About 1,100,000 were sold in the domestic market, 300,000 bales were sold for export, and about 900,000 bales were delivered to the British Government under the Lend-Lease Act. Sales of Government-owned stocks, other than for lend-lease, are limited by law to 1,500,000 bales in any calendar year.

Loans were made available to producers of 1942 crop cotton at 85 percent of the parity price on August 1, 1942. The loan rates were increased on October 7, 1942, to 90 percent of the parity price on August 1, 1942, in accordance with the provisions of the Price Stabilization Act. The average loan rate for 15/16-inch Middling cotton, net weight, is 17.92 per pound. It is expected that approximately 4 million bales of cotton from the 1942 crop will be placed under loan.

CORN

Commodity Credit Corporation contributed greatly to the war effort during the fiscal year 1942 by releasing much of its stock of corn to livestock feeders and distillers of commercial alcohol. Total sales of about 144 million bushels were made by the Corporation during this period. Much of this corn was used by farmers for increasing their livestock and poultry production. Sales of corn for export to England under the lend-lease program amounted to about 12 million bushels.

Farmers also made use of the supplies of corn which had accumulated under loan since 1937. Of approximately 400 million bushels which were under loan on July 1, 1941, or went under loan during the fiscal year, producers redeemed 180 million bushels. Only 11 million bushels were delivered to the Corporation. There still remained under loan on July 1, 1942, about 222 million bushels, while Commodity Credit Corporation owned 62 million bushels. Since July 1 redemptions have continued, and by November 28, 1942, the quantity of corn under loan had been reduced to slightly more than 107 million bushels, and owned stocks had been reduced to less than 34 million bushels.

Loans were offered on the 1941 crop of corn at an average rate of 74.8 cents per bushel in the commercial corn area and loans on the 1942-43 crop have been announced at an average rate of 80 cents per bushel. Approximately 110 million bushels of 1941 corn had been placed under loan by June 30, 1942, and it is expected that about 300 million bushels of 1942-43 corn will be placed under loan.

WHEAT

Loans at 85 percent of parity to cooperators in the agricultural adjustment program were made mandatory on both the 1941 and 1942 crops through the approval of marketing quotas by producers.

Loans were completed on 367 million bushels of wheat under the 1941 program. Prices increased sufficiently by late winter so that producers redeemed nearly 50 million bushels. However, prices dropped again in the spring, and farmers, being faced with the problem of caring for a new crop of nearly a billion bushels, delivered over 211 million bushels of warehouse-stored wheat to the Corporation. Producers also delivered about 3 million bushels of farm-stored wheat, but were resealing a large part of this wheat.

On January 19, 1942, the Corporation offered to sell wheat as feed for poultry and livestock at prices nearly comparable to corn prices. This program was inaugurated to provide additional feed supplies for the increased production of livestock and livestock products and to relieve the serious storage congestion. Over 35 million bushels had been sold under this program by the end of the fiscal year, and by November 21, 1942, total sales for feed amounted to more than 75 million bushels. Approximately 21 million bushels of wheat were sold for export, during the fiscal year 1942, principally to Latin-American countries, and 26 million bushels were sold domestically. Since January 1, 1942, nearly 17 million bushels of wheat have been sold to distillers for the production of alcohol for war uses. An average rate of \$1.14 at the farm was announced by Commodity Credit Corporation under its 1942 loan program, and by November 28, 1942, advances had been made on nearly 337 million bushels.

RYE

Loans were made on $2\frac{1}{2}$ million bushels of rye during the fiscal year 1942 at a loan rate of about 50 cents per bushel. Loans on nearly a million bushels

of the 1941 rye crop had been repaid by June 30, 1942, with no deliveries to the Corporation and a small quantity resealed.

Loans are available on the 1942 crop of rye at a rate of 60 cents per bushel. On November 7, 1942, loans had been made on over a million bushels, and it is estimated that a total of 5 million bushels will be placed under loan.

BARLEY

A loan rate of 45 cents per bushel at the farm for No. 1 barley was authorized on the 1941 barley crop to permit farmers to retain their crop on the farm for later feeding needs. Faced with the largest crop on record in many areas, farmers placed 16.3 million bushels under loan. By the end of the fiscal year, 11.6 million bushels had been redeemed by farmers, 386,000 bushels resealed and only a small amount delivered to the Corporation.

The loan rate on the 1942 crop is 55 cents a bushel for No. 1 barley in the states east of the Rocky Mountains and 60 cents west of the Rockies. On November 7, 1942, loans had been completed on over 7 million bushels and it is expected that the total placed under loan will reach 10 million bushels.

GRAIN SORGHUMS

The grain sorghums loan program was inaugurated in 1940 and was continued in 1941 with a loan rate of 40 cents per bushel for No. 1 grain sorghums stored on farms. Loans were completed on 328,000 bushels. Nearly all of these loans were repaid by November 7, 1942. Loans are available on the 1942 crop at 55 cents per bushel. It is estimated that 5 million bushels will be placed under loan.

FLAXSEED

The first loan program on flaxseed was adopted in 1941-42 in order to promote the orderly marketing of the crop. Loans were made on a basis which would net about \$1.70 per bushel on the farm. Producers placed only 731,000 bushels under loan since the price of flaxseed on the market was higher than the loan rate over most of the loan period. Less than 8 percent of these loans had not been repaid by the end of the 1942 fiscal year.

In order to assure producers of adequate returns on their increased production in 1942, which is needed to provide a replacement for oil formerly imported from the Far East, the Corporation has announced loan rates which will net producers about \$2.20 per bushel at the farm. A program under way which provides loans on raw linseed oil to the flaxseed crushers who agree to pay producers not less than the loan rate for flaxseed will probably avoid the necessity for any substantial quantity going under loan. On November 7, 1942, loans had been made on 831,000 bushels of flaxseed.

SOYBEANS

Recognizing the increasing importance which this crop would play in providing a part of the needed additional production of fats and oils, and the importance of assuring producers reasonable returns on the increased production, the Corporation offered the first loan on the 1941 soybean crop. Only about 148,000 bushels went under loan, since the loan rate of \$1.05 per bushel was lower than the market price throughout the season. Loans on about 81,000 bushels were outstanding on June 30, 1942. Nearly all of these loans have since been repaid.

In order to prevent the overselling of soybeans by producers so that seed supplies would be insufficient for seeding the increased acreage needed in 1942, the Corporation offered to buy seed beans at \$2.00 per bushel delivered to approved warehouses. This action resulted in adequate supplies of seed beans being available in all areas.

In order to encourage larger production of soybeans in 1942 the Corporation announced that it would purchase soybeans grading No. 4 or better, stored in or delivered to, approved warehouses, at from \$1.40 to \$1.60 per bushel, basis No. 2 or better, depending on class of soybeans and oil content. The Corporation also announced a loan program on soybeans stored on farms at 7 cents per bushel above the purchase price. Of the 1942 crop, estimated at 211 million bushels, only about a million bushels have been purchased by Commodity Credit Corporation and a small quantity placed under loan, since the larger part of the crop is being purchased by crushers who have contracts with Commodity Credit Corporation under which they agree to pay the support prices to producers. In order to assure the price protection and processing of these soybeans and production of the maximum amount of oil at prices not in excess of the ceiling, the Corporation has developed an extensive program to cover the storing and marketing of the crop. The crushing industry is cooperating in handling the crop.

SEED PURCHASE PROGRAM

In order to promote the conservation and improvement of farm lands as proposed in the agricultural conservation program of the Agricultural Adjustment Agency, and to protect the producers from abnormally low prices because of expanding production, Commodity Credit Corporation offered to purchase at guaranteed prices supplies of Austrian peas, hairy vetch, crimson clover, and ryegrass seeds. About 6 million pounds of these cover crop seeds were purchased and sold to the Agricultural Adjustment Agency for distribution to farmers in Southeastern states.

A purchase program for 1942 crop legume seeds was announced last fall under which approximately 104 million pounds had been purchased by November 20, 1942.

GRAIN BIN PURCHASE PROGRAM

Because of the large supplies of grain, it was necessary for Commodity Credit Corporation to move 33 million bushels storage capacity of steel bins from the Corn Belt to the wheat area, and to purchase an additional storage capacity of 150 million bushels. This storage for 150 million bushels consists of wooden bins ranging from 600-to 3000-bushels capacity. The bins are shipped to areas where storage is needed to store Corporation-owned grain, and are available for purchase by producers and warehousemen.

GRAIN ALCOHOL PROGRAM

In January 1942, Commodity Credit Corporation, in cooperation with the War Production Board, the Office of Price Administration and the Defense Supplies Corporation, inaugurated a program for the sale of Government-owned stocks of corn and wheat to distillers to be used in the production of 190-proof ethyl alcohol, butyl alcohol, and acetone. The War Production Board allocates the alcohol output to users for military purposes. A price ceiling established by the Office of Price Administration, governs the selling price of the product. This program helps to reduce the amount of sugar and molasses used for the production of alcohol, and also makes available additional supplies of by-products for livestock feeding.

The Corporation had signed contracts with 83 distillers operating 104 plants through September 30, 1942. These contracts provided for delivery of 19 million bushels of corn. During the months of October, November, and December an additional 8,600,000 bushels will be delivered to 74 distillers under contract.

During the first 6 months of 1942, processors were encouraged to experiment with mashes containing increasing percentages of wheat. By April 30, 1942, distillers were using an average of approximately 5 percent wheat. This ratio has gradually increased, and it is estimated that the ratio of wheat to corn used during the October-December period will be 49 percent. From January through December total commitments for delivery of wheat to distillers totaled over 15 million bushels. On December 1, six distillers were operating solely with wheat. The 190-proof industrial alcohol produced under this program is used in the production of munitions (principally, smokeless powder), airplane lacquer, and for lend-lease shipment. It is expected that substantial quantities will be allocated for the manufacture of synthetic rubber in 1943.

During October 1942, Commodity Credit Corporation initiated an experimental program for the production of a wheat meal (granular flour) to be used in alcohol distillation. This program would utilize the idle capacity of flour millers for grinding the whole wheat berry and extracting the unfermentables which give rise to residue in distillation, and would relieve the pressure for added quantities of steel for grinding equipment and evaporators. Approximately a million bushels of wheat have been ground into meal under this experimental program through November 30, 1942, and early reports indicate that the yields of alcohol to be obtained from this product are higher than

those of either corn or corn and wheat mixes. Results so far obtained have been so satisfactory that it seems probable that a regular program will be developed. Such a program would result in the use of a greater proportion of wheat for alcohol distillation with a higher percentage of recovery of the feed byproducts.

TOBACCO

Flue-Cured Tobacco: In the summer of 1941 the British buyers were still unable to purchase flue-cured tobacco because of the continued exchange restrictions and of the increasing restrictions to private transactions. Because of these conditions incident to the war, Commodity Credit Corporation found it more and more necessary to provide the means of removing from the market the excess of production over domestic requirements.

The 1941-42 program for flue-cured tobacco was operated through the regular export trade by means of contracts under which export companies bought tobacco either for the account of, or sale to, Commodity Credit Corporation. In either case such firms had an option to repurchase at cost, plus charges.

More than 118 million pounds (green weight) or almost 20 percent of the 1941 production was absorbed in this manner and growers received an average price of 25.4 cents per pound for their crop, instead of the drastically lower price that would otherwise have been received.

By the close of the fiscal year 1942, 134 million pounds of 1939 tobacco, 78 million pounds of 1940 tobacco, and $3\frac{1}{2}$ million pounds of 1941 tobacco (all redried weights), had been liquidated under the lend-lease program, and over 700,000 pounds had been repurchased by dealers under their option. Thus the quantities available for shipment under lend-lease were greatly reduced. Additional shipments since July 1, 1942, have brought the total flue-cured tobacco released for shipment under lend-lease to 325 million pounds by December 1, 1942.

The tobacco loan programs are mandatory for price-supporting purposes, and purchases for lend-lease requirements are essential. In order to meet requirements under the lend-lease program, it will be necessary for Commodity Credit Corporation to secure about 240 million pounds from the 1942 crop. A price freezing order issued by the Office of Price Administration should enable the Corporation to secure the required quantity of tobacco. Agreements have been entered into with 51 packers for the required poundage. During the past year the Army and Navy have taken over the major storage warehouses at Norfolk and Newport News, Virginia. This has caused a shortage of available warehouse space. This, and the need for minimizing transportation have made it necessary to find new storage facilities at interior points.

Dark Tobacco: During the fiscal year 1942 Commodity Credit Corporation continued to operate mandatory programs on dark fire-cured and dark air-cured tobaccos to support market prices in the absence of export outlets lost because of the war. At the close of the fiscal year 1942 advances had been

made on a total of 16 million pounds of the 1941 crop. To December 1, 1942, over 6 million pounds had been released for shipment under the lend-lease program, and 50,000 pounds of perique had also been shipped. Over 4 million pounds have been sold for the manufacture of nicotine, an important insecticide. Since many foreign sources of insecticide poisons have been cut off by the war, it will be necessary to divert a larger quantity of tobacco for the manufacture of nicotine next year.

Contracts for the purchase of 1942 dark tobacco have been completed, and of the estimated crop of 107 million pounds, Commodity Credit Corporation will acquire nearly 21 million pounds.

Burley Tobacco: A sharp decline in prices in the 1940-41 season, brought about by gradually accumulating surpluses demonstrated the need for price supporting loans. Rising cigarette consumption and the 3-year production adjustment through marketing quotas approved in November 1940, have demonstrated that supply can be brought into line with market demands. Loan programs have largely contributed to a stabilization of prices on this type of tobacco. All of the loans on the 1940 crop and most of those on the 1941 crop have been redeemed.

The 1942 program will be operated through cooperative associations in a manner similar to that under which the 1940 and 1941 programs were operated, and contracts for the acquisition of 11 $\frac{1}{2}$ million pounds have been completed.

Cigar Leaf Tobacco: In an effort to support the constantly lowering prices on certain types of cigar tobaccos, Commodity Credit Corporation entered into loan agreements covering 1941 tobacco. A total of 182,571 pounds redried weight was secured by the associations, with an average advance to growers of over 12 cents per pound, under mandatory rates equal to 85 percent of parity. Of this quantity 77,230 pounds have been sold.

The program for the 1942 crop of cigar leaf tobacco has not yet been completed, but the situation with regard to maintaining a fair market price is as acute as ever, and price supporting loans at 90 percent of parity will be covered by agreements with at least three cooperative associations.

PRUNES AND RAISINS

Stronger domestic demand and large requirements for prunes and raisins under the lend-lease programs resulted in the liquidation of stocks acquired under the 1940 program and made it unnecessary to undertake loan programs for these commodities in 1941. Purchases are being continued under the General Commodities Purchase Program.

PEANUTS

The peanut loan program will be larger in the fiscal year 1943 than in any previous year because of the great increase in production for oil purposes. As one method is offsetting the deficit in imports of fats and oils, the

peanut production goal was set at 5 million acres, an increase of approximately 3 million acres over the fiscal year 1942. This program is operating in cooperation with the Agricultural Marketing Administration, through peanut cooperative associations.

RICE

As required by the Agricultural Adjustment Act of 1938, as amended, a rice loan program at 85 percent of parity was made available for the 1941 crop. Prices strengthened after the program was announced, however, and no loans were made. With deterioration of the 1941 crop during the harvest season and the shutting off of a large part of the oriental supplies after Pearl Harbor, prices rose to high levels.

Domestic production in 1942 has been increased nearly 50 percent, to the highest level in history. Prices are declining, but are still well above the loan levels. A rice loan and purchase program has been approved for 1942. If market congestion occurs, large loan and purchase operations will become necessary.

TURPENTINE AND ROSIN

The 1942 Gum Naval Stores Programs of the Commodity Credit Corporation and the Naval Stores Conservation Program administered by the Forest Service were altered to encourage the achievement of the production goals announced by the Secretary of Agriculture in January of 1942. To encourage production, loans were made available at 85 percent of parity prices. In June 1942, pursuant to a request of the War Production Board, a purchase program, at rates approximating 93 percent of parity prices, was announced for the purpose of acquiring a stock pile of gum turpentine and rosin.

As of November 30, 1942, approximately 130,000 barrels of turpentine and 300,000 drums of rosin had been acquired under the purchase program and only negligible stocks remained pledged under the 1942 loan program.

On April 1, 1942, the beginning of the 1942 production season, Commodity Credit Corporation had on hand 675,000 barrels and drums of rosin from the 1938-41 crops. By November 30, these stocks had been reduced to 495,000 barrels, most of the 180,000 barrel reduction representing shipments for lend-lease purposes.

ALASKA SPRUCE LOG PROGRAM

The Alaska Spruce Log Program is carried on in cooperation with the Forest Service and with the approval of the War Production Board for the purpose of increasing the supply of lumber suitable for the manufacture of training planes and gliders. The logging is carried on in the Tongass National Forest in Alaska, which is under the supervision of the Forest Service, and the logs are towed to the Puget Sound area where they are sold to the mills equipped to saw airplane-grade lumber. The Forest Service acts as agent of Commodity Credit Corporation in supervising the program and furnishes the technical experience and facilities required. The actual logging operations are carried

on by contracts with private individuals and concerns. The program is planned on the basis of the production of at least 10 million board feet of airplane-grade spruce logs per month. This rate of output should be reached, barring unforeseen difficulties, before the end of the fiscal year 1943.

AGRICULTURAL SUPPLIES PURCHASE AND LOAN PROGRAM

A number of war supply projects for agricultural commodities have been authorized under the Agricultural Supplies Purchase and Loan Program. The largest commitments under this program have been for programs designed to increase domestic production of vegetable fats and oils. It was necessary first to purchase and make available to producers seed supplies of peanuts, castor beans and soybeans, and then to finance field equipment, warehouse facilities, and bagging materials and to support the announced prices for the harvested crops of these oil seeds.

Other activities under the Agricultural Supplies Purchase and Loan Program include price support for potatoes to insure adequate plantings; the purchase of spruce logs from the Tongass National Forest in Alaska for use in the manufacture of airplanes and gliders; the purchase of and sale to bag manufacturers of frozen stocks of burlap; the purchase and sale of hempseed for carrying out a huge hemp production program and the purchase of the 1942 crop of hempseed; an experimental program for the extraction of syrup from sorgo cane and the conversion of the syrup into alcohol; the purchase of a small amount of pyrethrum seed for the expansion of domestic production of this valuable insecticide; the acquisition of a stock pile of turpentine and rosin; the financing of two plants for the processing of fiber flax; the purchase for distribution to growers of cover crop seeds; the purchase of a reserve supply hybrid seed corn; and the purchase and sale of prefabricated grain bins and portable grain loading elevators.

GENERAL COMMODITIES PURCHASE PROGRAM

The General Commodities Purchase Program was inaugurated in March 1941, for the purchase of many agricultural commodities and products to meet lend-lease and other essential needs. Such purchases are made for the account of Commodity Credit Corporation by the Federal Surplus Commodities Corporation, and sales are made to various agencies for lend-lease, Army, Navy, Red Cross and relief purposes. On October 17, 1942, cumulative purchases amounted to 1,610 million dollars and cumulative sales amounted to 1,386 million dollars, and 141 commodities were on the approved list for purchase under this program.

FOREIGN PURCHASES

Pursuant to executive orders, a Foreign Purchase Program was inaugurated in June 1942. Agricultural commodities produced in foreign countries friendly to the United States are being purchased for the accumulation of stock piles, for lend-lease, military and domestic consumption. In addition to supplying essential needs the program is an integral part of the planned mobilization of the economic resources of the Western Hemisphere and United Nations, and aids in

the stabilization of the economies of the South and Central American countries in accordance with the agreement reached at the Conference of Foreign Ministers at Rio de Janeiro in January 1942.

Commodities being purchased include, among others, alcohol, sugar, molasses, coffee, cocoa, rotenone, whale oil and vegetable oilseeds and oilseed products.

UNITED STATES DEPARTMENT OF AGRICULTURE

C
COMMODITY CREDIT CORPORATION

Statement of Loans and Commodities Owned

November 30, 1942

	Advances on Commodity Loans	Repayments, Acquisitions & Adjustments on Commodity Loans	Commodity Loans Held by C.C.C.	Quantities of Commodities Held as Collateral
<u>Agricultural Supplies Program:</u>				
1942 Agricultural Supplies	\$ 3,775,844.02	\$ 554,250.48	\$ 3,221,593.54	
<u>Barley Loans:</u>				
1940 Barley, Form A	573,239.13	570,968.31	2,270.82	7,088 Bu.
1941 Barley, Form A	3,342,057.22	3,000,753.97	341,303.25	797,454 Bu.
1941 Barley, Form B	225,602.33	225,554.70	47.63	-
1942 Barley, Form A	49,358.60	243.60	49,115.00	89,983 Bu.
1942 Barley, Form B	60,019.69	36,763.70	23,255.99	39,519 Bu.
Subtotal	4,250,276.97	3,834,284.28	415,992.69	934,044 Bu.
<u>Barley Resealing Programs:</u>				
1940 Noncash transfers to principal	126,802.29	122,885.71	3,916.58	12,055 Bu.
1941 Noncash transfers to principal	745,665.33	193,864.53	551,800.80	1,252,847 Bu.
Subtotal - (Resealing)	872,467.62	316,750.24	555,717.38	1,264,902 Bu.
Subtotal - (All Barley)	5,122,744.59	4,151,034.52	971,710.07	2,198,946 Bu.
<u>Corn Loans:</u>				
1938 Corn	16,599,391.57	16,599,371.74	19.83	- 1/
1938-39 Corn	141,825,758.39	141,821,345.47	4,412.92	10,423 Bu.
1939 Corn	160,556,801.14	160,556,648.57	152.57	225 Bu.
1940 Corn	9,564,511.90	9,014,460.91	550,050.99	893,136 Bu.
1941 Corn	14,372,760.84	4,508,177.40	9,864,583.44	13,515,979 Bu.
Subtotal	342,919,223.84	332,500,004.09	10,419,219.75	14,419,763 Bu.
<u>Corn Resealing Program:</u>				
1938-39 Noncash transfers to principal	114,415,646.32			
Storage Disbursements	16,949,271.20			
Subtotal - (Resealing)	131,364,917.52	117,716,480.24	13,648,437.28	20,506,073 Bu.
Subtotal - (All Corn)	474,284,141.36	450,216,484.33	24,067,657.03	34,925,836 Bu.
<u>Cotton Loans:</u>				
1938 Cotton	118,808,008.70	118,785,066.64	22,942.06	430 Bales
1940 Cotton	71,348,497.99	71,292,083.28	56,414.71	1,208 Bales
1941 Cotton	142,447,399.64	90,257,729.10	52,189,670.54	775,207 Bales
1942 Cotton	55,174,352.50	395,766.87	54,778,585.63	758,859 Bales
1942 Cotton-Farm Storage	50,558.89	959.15	49,599.74	593 Bales
Subtotal	387,828,817.72	280,731,605.04	107,097,212.68	1,536,297 Bales
<u>Flaxseed Loans:</u>				
1941 Flaxseed, Form A	157,942.60	145,326.15	12,616.45	7,439 Bu.
1941 Flaxseed, Form B	21,812.01	21,759.16	52.85	32 Bu. 1/
1942 Flaxseed, Form A	14,331.47	-	14,331.47	6,343 Bu.
1942 Flaxseed, Form B	8,933.64	-	8,933.64	4,022 Bu.
Subtotal	203,019.72	167,085.31	35,934.41	17,836 Bu.
<u>Foreign Purchase Loans:</u>				
1942 Foreign Purchases	139,263.65	849.44	138,414.21	-
<u>Grain Sorghums Loans:</u>				
1941 Grain Sorghums, Form A	58,097.68	54,094.64	4,003.04	10,976 Bu.

<u>Agricultural Supplies Program:</u>	<u>Advances on Commodity Loans</u>	<u>Repayments Acquisitions & Adjustments on Commodity Loans</u>	<u>Commodity Loans Held by C. C. C.</u>	<u>Quantities of Commodities Held as Collateral</u>
<u>Rye Loans:</u>				
1940 Rye, Form A	\$ 1,135,485.53	\$ 1,134,348.39	\$ 1,137.14	2,956 Bu.
1941 Rye, Form A	837,051.54	647,682.05	183,363.49	375,469 Bu.
1942 Rye, Form A	26,373.16	787.96	25,585.20	42,642 Bu.
1942 Rye, Form B	484.38	-	484.38	807 Bu.
Subtotal	1,999,394.61	1,782,818.40	216,576.21	421,874 Bu.
<u>Rye Resealing Programs:</u>				
1939 Noncash transfers to principal	7,148.97	7,095.04	53.93	247 Bu.
1940 Noncash transfers to principal	322,420.01	285,855.23	36,564.78	93,453 Bu.
1941 Noncash transfers to principal	268,419.77	12,333.91	256,085.86	509,102 Bu.
Storage Disbursements	5,688.50	-	5,688.50	- Bu.
Subtotal - (Resealing)	603,677.25	305,284.18	298,393.07	602,802 Bu.
Subtotal - (All Rye)	2,603,071.86	2,088,102.58	514,969.28	1,024,676 Bu.
<u>Soybean Loans:</u>				
1941 Soybeans, Form A	56,609.60	53,880.10	2,729.50	2,598 Bu.
1941 Soybeans, Form B	2,588.03	2,588.03	-	-
1942 Soybeans, Form A	17,255.69	-	17,255.69	10,347 Bu.
Subtotal	76,453.32	56,468.13	19,985.19	12,945 Bu.
<u>Tobacco Loans:</u>				
1939 Dark Fired Tobacco	494,601.39	494,601.39	-	-
1940 Dark Fired Tobacco	4,793,486.96	3,843,868.74	949,618.22	6,211,506 Lbs.
1941 Dark Fired Tobacco	1,845,267.84	56,543.86	1,788,723.98	9,203,810 Lbs.
Subtotal	\$ 7,133,356.19	4,395,013.99	2,738,342.20	15,415,316 Lbs.
<u>Turpentine and Rosin Loans:</u>				
1938 Turpentine and Rosin	12,566,453.39	11,806,495.07	759,958.32	70,582 Bbls.
1939 Turpentine and Rosin	9,322,516.98	8,949,098.77	373,418.21	33,842 Bbls.
1940 Turpentine and Rosin	7,029,913.79	3,849,296.43	3,180,617.36	265,055 Bbls.
1941 Turpentine and Rosin	1,630,573.68	49,548.68	1,581,025.00	128,146 Bbls.
1942 Turpentine and Rosin	8,454,440.81	8,408,238.58	46,202.23	1,762 Bbls.
Subtotal	39,003,898.65	33,062,677.53	5,941,221.12	33,935 Gals.
<u>Wheat Loans:</u>				
1939 Wheat, Form A	10,288,867.79	10,287,509.26	1,358.53	2,511 Bu.1/
1940 Wheat, Form A	12,140,344.06	12,133,848.29	6,495.77	8,461 Bu.1/
1940 Wheat, Form B	154,509,912.73	154,506,789.86	3,122.87	643 Bu.1/
1941 Wheat, Form A	102,385,909.31	83,002,109.52	19,383,799.79	20,035,152 Bu.
1941 Wheat, Form B	226,925,232.40	225,172,919.90	1,752,312.50	2,162,521 Bu.
1942 Wheat, Form A	2,028,087.62	12,260.78	2,015,826.84	2,662,987 Bu.
1942 Wheat, Form B	11,200,120.71	34,390.19	11,165,730.52	9,606,151 Bu.
Subtotal	519,478,474.62	485,149,827.80	34,328,646.82	34,478,426 Bu.
<u>Wheat Resealing Programs:</u>				
1939 Noncash transfers to principal	45,961.77	45,961.77	-	-
1940 Noncash transfers to principal	3,860,937.49	3,712,364.64	148,572.85	196,357 Bu.
1941 Noncash transfers to principal	37,730,435.41	3,170,925.33	34,559,510.08	35,267,390 Bu.
Storage Disbursements	245,512.61	66.78	245,445.83	-
Subtotal - (Resealing)	41,882,847.28	6,929,318.52	34,953,528.76	33,463,747 Bu.
Subtotal - (All Wheat)	561,361,321.90	492,079,146.32	69,282,175.58	69,942,173 Bu.
TOTAL COMMODITY LOANS	\$1,481,590,030.66	\$1,267,556,812.31	\$214,033,218.35	

Note:

Total Advances on Commodity Loans of \$1,481,590,030.66 excludes \$1,058,226,866.19 of inactive commodity loans.

COMMODITIES OWNED BY COMMODITY CREDIT CORPORATION

<u>Commodity</u>	<u>Quantity</u>	<u>Book Value</u>
Agricultural Supplies	-	\$ 69,209,704.26
Barley	269,291 Bu.	127,800.66
Corn	48,030,741 Bu.	37,126,321.87
Cotton - 1934-35	823,025 Bales	67,495,226.78
Cotton - 1937-38	2,546,409 Bales	140,138,283.52
Cotton - 1938-39	81 Bales	4,303.77
Cotton - 1940-41	32 Bales	1,610.87
Foreign Purchases	--	16,662,691.23
Grain Sorghums	9,872 Bu.	3,850.29
Other commodities	--	310,840,893.74
Rye	357,040 Bu.	223,251.23
Tobacco	365,008,868 Lbs.	146,096,478.34
Wheat	301,763,665 Bu. 2/	342,749,982.13
Total		<u>\$1,130,680,398.69</u>

Notes:

- 1/ - In process of final liquidation. Inventory adjustments pending.
 2/ - Includes wheat held in producers' pools.

UNITED STATES DEPARTMENT OF AGRICULTURE

COMMODITY CREDIT CORPORATION

COMMODITY LOANS HELD BY BANKS AND
OTHER LENDING AGENCIES

NOVEMBER 30, 1942

	Quantity	Face Amount of Producers' Notes Held by Lending Agencies
1941 Barley, Form A		\$ 11,041.27
1941 Barley, Form B	16,412 Bu.	2,555.68 ^{1/}
1942 Barley, Form A	8,113,273 Bu.	4,326,918.87
1942 Barley, Form B	2,307,552 Bu.	1,247,714.30
Subtotal	10,437,237 Bu.	\$ 5,588,230.12
1940 Corn, Form A	19,350,797 Bu.	\$ 11,797,815.71
1941 Corn, Form A	53,031,834 Bu.	38,586,740.07
Subtotal	72,382,631 Bu.	\$ 50,384,555.78
1941 Cotton	153,593 Bales	\$ 9,915,453.35
1942 Cotton	397,047 Bales	34,891,357.82
Subtotal	550,640 Bales	\$ 44,806,811.17
1942 Flaxseed, Form A	447,455 Bu.	\$ 1,005,982.90
1942 Flaxseed, Form B	653,897 Bu.	1,440,040.31
Subtotal	1,101,352 Bu.	\$ 2,446,023.21
1941 Rye, Form A	9,534 Bu.	419.78 ^{1/}
1942 Rye, Form A	2,550,989 Bu.	1,528,631.64
1942 Rye, Form B	82,302 Bu.	46,197.29
Subtotal	2,642,825 Bu.	\$ 1,575,248.71
1942 Soybeans, Form A	574,632 Bu.	\$ 881,840.53
1942 Wheat, Form A	140,135,974 Bu.	\$154,989,898.55
1942 Wheat, Form B	186,341,765 Bu.	214,766,571.45
Subtotal	326,477,739 Bu.	\$369,756,470.00
Grand Total		<u>\$475,439,179.52</u>

Note:

^{1/} - In process of final liquidation. Inventory adjustments pending.

UNITED STATES DEPARTMENT OF AGRICULTURE

Commodity Credit Corporation

B A L A N C E S H E E T

As at November 30, 1942

ASSETS

Cash		\$	34,001,600.48
Commodity Loans Held by			
Commodity Credit Corporation	\$214,033,218.35		
Accrued Interest Receivable	9,324,202.99		
Accrued Carrying Charges on Commodity Loans			
Held by Commodity Credit Corporation	4,212,923.82		
Accounts and Other Receivables	24,056,605.51	251,626,950.67	
Commodities Owned:			
Agricultural Supplies	69,209,704.26		
Barley (269,291 bu.)	127,800.66		
Corn (48,030,741 bu.)	37,126,321.87		
Cotton (3,369,547 bales)	207,639,424.94		
Foreign Purchases	16,662,691.23		
Grain Sorghums (9,872 bu.)	3,850.29		
Other Commodities	310,840,893.74		
Rye (357,040 bu.)	223,251.23		
Tobacco (365,008,868 lbs.)	146,096,478.34		
Wheat (301,763,665 bu.)	342,749,982.13	1,130,680,398.69	
Steel Grain Bins		7,344,646.37	
Furniture and Fixtures		252,444.06	
Contra Account:			
Guaranteed Loans and Purchases		669,023,838.30	
Letters of Credit Authorized		1,463,215.67	
TOTAL ASSETS			<u>\$2,094,393,094.24</u>

LIABILITIES AND RESERVES

Notes Payable:			
Series "F" Notes	\$289,458,000.00		
Series "G" Notes	411,596,000.00		
Treasury Notes	300,000,000.00	\$1,001,054,000.00	
Accrued Interest Payable		2,276,023.71	
Accrued Carrying Charges		26,152,833.88	
Miscellaneous Liabilities		112,614,592.63	
Contingent Liabilities:			
Obligations for Loans and Purchases		669,023,838.30	
Reserve for Losses		133,420,713.31	
Letters of Credit Payable		1,437,876.74	
Letters of Credit Issued		1,463,215.67	
Bank Loans Payable		46,950,000.00	
TOTAL LIABILITIES AND RESERVES			<u>\$1,994,393,094.24</u>

NET WORTH

Capital Stock		<u>100,000,000.00</u>	
TOTAL LIABILITIES, RESERVES, AND NET WORTH			<u>\$2,094,393,094.24</u>

AGRICULTURAL CONSERVATION AND ADJUSTMENT ADMINISTRATION

(a) CONSERVATION AND USE OF AGRICULTURAL LAND RESOURCES

Appropriation Act, 1943	\$450,000,000
Proposed transfers in the 1944 estimates to other appropriations (see Budget schedules for details)	-5,529,928
Total available, 1943	444,470,072
Budget estimates, 1944	400,000,000
Decrease (including decrease of \$164,240 travel funds returned to surplus)	-44,470,072

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
Payments to farmers under Sections: 7 to 17, inclusive, of Act of February 29, 1936	\$482,182,598	\$429,879,566	\$386,908,709	\$-42,970,857
Administrative Expenses	11,361,146	13,167,270	11,939,180	-1,228,090
Allotments and transfers as shown in the Budget schedules:				
To agencies cooperating in the Agricultural Conservation Pro- gram	1,011,379	1,190,334	1,083,449	-106,885
To Agricultural Marketing Ad- ministration for adjustments in Freight Rates (Sec. 201, Agr. Adj. Act. of 1938)	69,260	68,662	68,662	-
Net obligations, Agricultural Conservation Program	494,624,383	444,305,832	400,000,000	-44,305,832
Covered into Treasury in accord- ance with Public Law 674	-	+164,240	-	-164,240
Total available	494,624,383	444,470,072	400,000,000	-44,470,072
Transfers in estimates to other appropriations (see Budget schedules for details)	+4,764,288	+5,529,928	-	-
Total estimate or appro- priation	499,388,671	450,000,000	400,000,000	

DECREASE

The decrease of \$44,470,072 in this appropriation consists of a decrease of \$164,240 in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$42,970,857 in appropriated funds available for payments to farmers participating in agricultural conservation programs. This decrease in appropriated funds does not result in a corresponding decrease in payments to farmers cooperating in the 1943 agricultural conservation program below the 1942 program due (a) to the prepayment of \$26,523,584 more out of the 1943 appropriation in connection with the 1943 agricultural conservation program than was prepaid out of the 1942 appropriation in connection with the 1942 agricultural conservation program; (b) to an increase of \$4,447,273 in the amount to be borrowed from the Commodity Credit Corporation under authority of Section 391(c) of the Agricultural Adjustment Act of 1938, as amended; and (c) to the contemplated non-use of the 1944 appropriation being used to repay loans from Commodity Credit Corporation, whereas \$12,000,000 of the 1943 appropriation was used for that purpose.

(2) A decrease of \$1,228,090 in administrative expenses of the Agricultural Adjustment Agency in administering the agricultural conservation program.

(3) A decrease of \$106,885 in allotments and transfers to other agencies cooperating in the agricultural conservation programs.

CHANGES IN LANGUAGE

In addition to the usual changes in the year dates, amounts and availability, the estimates include proposed changes in language, the effects of which are as follows:

(1) To eliminate the provision that not to exceed \$4,000,000 shall be available for the four regional laboratories under section 202(f) of the Agricultural Adjustment Act of 1938, as amended, since a separate appropriation item under the Agricultural Research Administration, is provided in the Budget for the regional research laboratories.

(2) To eliminate the provision with reference to reimbursing the Agricultural Adjustment Agency for maintaining registers of items of indebtedness due and payable to other bureaus and agencies of the Department which have requested the Agricultural Adjustment Agency to collect from cooperators under the farm program, since this language was contained in the Department of Agriculture Appropriation Act, 1943, and provided the necessary authority on a permanent basis.

WORK UNDER THIS APPROPRIATION

General: The work under this appropriation is concerned with carrying into effect agricultural conservation programs formulated under sections 7 to 17 of the Soil Conservation and Domestic Allotment Act, as amended, the Agricultural Adjustment Act of 1938, as amended (except the making of payments under sections 303 and 381 and the provisions of Titles IV and V).

Objective: The aims of the 1943 agricultural conservation program are to direct farming efforts toward the production of those agricultural commodities needed for supplying the food and other farm products which our army, our allies, and our people need by:

- (a) Restricting the acreage of certain crops now in surplus in order to avoid overtaxing storage and transportation facilities, and to prevent undue competition for land, labor, and equipment needed in the production of essential war crops.
- (b) Increasing and maintaining acreages of those crops for which needs have been increased as a result of the war.
- (c) Increasing the efficiency of production of all crops through the use of conservation practices which while directly increasing production will preserve and build up the Nation's soil resources.

The Problem and its Significance: During and immediately following the first World War farmers increased production to meet wartime demands and to take advantage of the high prices. Over 40 million acres of grassland were plowed up and the results remain with us today in the form of erosion, areas subject to dust storms, low farm production, etc. Foreign and domestic tariff policies after the end of the World War caused the loss of exports and the continuation of this expanded agricultural production resulted in surpluses piling up. Protective tariffs together with other industrial devices kept the prices of manufactured goods high and the actual buying power of farm products became progressively lower. The farmers, in an effort to overcome the disadvantage of lower income further increased production with the result that by 1930 more than 100 million acres which should never have been in cultivation were seriously damaged by erosion. It was recognized that there was urgent need for an organized farm program to assist the farmer in adjusting his production to meet the changing demand situation and to provide for soil conservation.

The enactment of the Soil Conservation and Domestic Allotment Act in 1936 provided for the soil conservation features of the present program. Farmers receive payments for shifting acreages from soil-depleting to soil-conserving crops and for carrying out soil-building and soil-conserving practices on farm and range lands. It was evident, however, that a soil conservation program by itself was not broad enough to protect the income and status of the farmer.

The Agricultural Adjustment Act of 1938 was enacted to supplement the Soil Conservation and Domestic Allotment Act and these Acts, as amended, provide for:

- (1) Conservation payments to producers for planting within their acreage allotments of soil depleting crops and for carrying out soil building practices.
- (2) Marketing control of surpluses when approved by two-thirds of the producers voting and a penalty on those producers who market in excess of their quotas.

- (3) Parity payments (when appropriations are made therefor and if required under the formula) to producers of corn, wheat, cotton, tobacco, and rice upon their normal production of such commodities.
- (4) Commodity loans to support farm prices and store reserves.
- (5) Crop insurance on wheat and cotton.

Progress and Current Program: The American farmer has repeatedly demonstrated his willingness to produce abundantly, but he has not always produced wisely. In the present war it is the primary job of the AAA programs to furnish guidance, assistance, and incentives to the farmers in producing the right amount of the right commodity at the proper time, without waste. It is essential that care be exercised to make sure that the Nation shall always have the soil resources with which to go on producing in the desired volume. To squander the productive resources of our land in an all-out plowup spree, without thought of tomorrow's needs, would be both wasting our talents and inviting disaster. In wartime the matter of gearing our farm output to actual needs is more important than ever before.

Each of the various features of the AAA farm program is designed to play its particular part toward meeting the national farm objectives. Thus acreage allotments synchronize with production goals and furnish a guide to farmers for planting the desired acreage of each crop. Marketing quotas place a limit on the marketing of crops for which demand is not so urgent, either because they are not vitally needed in the war effort or because of large supplies already on hand. Parity payments are provided to bridge the gap between parity and what the farmer would otherwise receive. Soil-building practices result in immediate higher crop output.

In the past, production adjustment devices, including acreage allotments, marketing quotas, and other phases of the AAA programs, were used only on surplus crops and were employed primarily to bring supplies downward more nearly into line with demand. Farmers were thereby assured a return which more nearly approached parity, and land not needed for the production of soil-depleting crops, of which there was a surplus, was released for the production of crops needed for food, feed for use on the farm, and for the carrying out of soil-building practices designed to prevent erosion and increase or conserve soil productivity.

In the 1942 program the emphasis was centered on production. Allotments and quotas were used on the one hand to restrict the acreage of crops of which there were an abundance or a surplus, such as cotton and wheat, in order to prevent the wasteful and unwarranted use of the limited supplies of good land, labor, fertilizer, tools, equipment, and other factors of production; and on the other hand to encourage the expanded acreage of crops for which increases were urgently needed in the war effort.

As industry plunged into the problem of converting to a war basis after declaration of war, the demand for certain war materials became acute.

Since many of these materials were used to manufacture farm machinery, the output of that type of equipment was considerably curtailed. Added to this was the problem of farm labor scarcities as the armed forces claimed more and more farm men, and the higher wages of rapidly expanding industry attracted greater numbers of farmers. Thus, with less new machinery, and less labor, and with scarcities of certain seeds and of many supplies, farmers of the United States tackled the problem of producing the largest crop in the history of American agriculture. In spite of the size of the 1942 job undertaken by farmers, and in spite of the handicaps and difficulties encountered, as a whole these goals were exceeded.

Elected farmer local and county committees as provided in the Agricultural Adjustment Act are an important link in apprising farmers of changing conditions and requirements, and through them problems which exist on the farms are transmitted to Washington for attention. Without these committeemen it would have been impossible to meet these goals. Not only are these committees necessary to the operation of the AAA programs, but they also serve the Department in reaching the farmer for many war campaigns. The full facilities of the AAA's 85,000 county and local committeemen (140,000 if alternates are called on) are available to USDA State and County War Boards. Under the direction of these boards, which are headed by State and County AAA Committee Chairmen, the whole agricultural war effort is given cohesion and unity.

The plan for achieving the 1943 farm production objective spells out even more specifically the wartime production responsibility of each farmer. These goals, expressed in farm plans, are to be applied to each farm in the form of a commitment on the part of the farmer to produce food and war commodities. Furthermore, agricultural conservation payments are to be conditioned upon fulfilling the goals specified in the individual farm plan.

Therefore, in formulating the 1943 agricultural conservation program, primary attention has been focused on the kind of a program which would make the greatest contribution toward achieving the planned production needed in the prosecution of the war taking into consideration the agricultural commodities needed by the armed forces, the civilian population, and for lend-lease. The problem naturally subdivides itself into three parts: (1) restricting the acreages of certain crops now in surplus in order to avoid overtaxing storage and transportation facilities, and to prevent undue competition for land, labor, equipment, etc., needed in the production of other crops; (2) increasing and maintaining the acreages of those crops for which needs have been increased as a result of the war; and (3) increasing the efficiency of production of all crops through the use of practices which directly increase production.

In general, supplies of allotment crops are adequate and there is still need for restricting the acreages of them. Since these are the crops generally grown by most farmers, they are the ones which would naturally be expanded in response to a general appeal for increased agricultural

production. In the case of wheat, for example, it is quite possible that millions of acres of winter wheat in excess of the wheat allotment would have been planted for harvest in 1943 if farmers at planting time had not thought that the farm program with respect to wheat would continue in 1943 substantially the same as in 1942. Obviously, an extra 15 or 20 million acres of land devoted to wheat would interfere with production of flaxseed and feed grains in the wheat area, and would also tend to decrease the amount of land summer fallowed and thus bring about lower yields and less efficient production in future years.

In the case of cotton, production in 1942 is now estimated in excess of probable consumption, including exports, during the 1942-1943 marketing year and the carryover at the beginning of the 1943 marketing year is likely to be larger than at the beginning of the 1942 marketing year. Further expansion of cotton acreage would seriously interfere with the large production of peanuts for oil which will be asked for in 1943, and would also result in inefficient use of labor, equipment, and fertilizer.

The acreages of certain crops, notably soybeans, flaxseed, and peanuts for oil, were greatly increased in 1942 in order to compensate for the loss of oil imports caused by war in the Pacific. Present indications are that still further increases in the acreages of these crops will be asked for in 1943. While price support measures with respect to these crops were undoubtedly major factors in securing the increased acreages in 1942 there is considerable evidence that price support alone will not again result in securing the needed acreages in the areas where they can be grown to the best advantage, considering adaptability of land, the need for production of other crops, and processing and transportation facilities. A farm-to-farm survey recently made by the University of Illinois indicated the following reasons for the increase in soybean acreage in 1942 and gave their relative importance in the order named: (1) reduction in 1941 fall seedings of winter wheat due to unfavorable weather; (2) a desire to contribute to the war effort; and (3) price support. The people who conducted this survey are of the opinion that there may be considerable shift from soybeans to other crops in Illinois in 1943 unless more positive measures are taken to encourage the production of beans. Even if prices of war crops are supported at levels comparable to those of the basic crops there are still several reasons why the tendency of the farmers will be to grow the basic crops in preference to war crops. One reason is that in many cases a war crop is a crop which has not been grown on the farm or was grown in relatively small amounts and therefore involves, from the point of view of the farmer, a risk which is not present with respect to crops which he normally grows. It may also require different or additional machinery, and different methods of cultivation and harvesting processes with which the farmer is unfamiliar. All of these factors, of course, are in addition to the natural inertia which causes the farmer to follow about the same farming system from year to year.

The cost to farmers of converting from normal crops to war crops will vary from crop to crop and farm to farm, depending upon the exact nature of the conversion required on each farm, whether new machinery and equipment are necessary, and to what extent the returns from the war crops fall below those from crops normally grown. If only the return per acre is considered it is generally agreed the present support prices of war crops result in returns per acre considerably less than those which can be realized from growing the basic crops in the same areas.

The agricultural conservation program has placed a steadily increasing emphasis on soil-building practices during the past several years, with the result that the productivity of crop and grazing land is considerably higher at present than it would have been without the conservation programs.

With the added drain on soil fertility brought about by growing war crops, most of which are highly soil depleting in nature, it is now more important than ever to insure the carrying out of practices which will tend to increase and maintain higher yields per acre. For example, the shortage of nitrogenous fertilizer greatly increases the necessity of growing leguminous cover crops which will supply the nitrogen in the soil to replace that which would otherwise be added by fertilizer. Another example is found in the need for winter cover crops following peanuts, which crop leaves the land particularly susceptible to erosion. The attached table showing annual yields per acre of cotton, corn, wheat, and rice from 1930 to date, together with certain averages, indicates rather clearly that there has been a definite upward tendency in yields during the period when the agricultural conservation programs have been in operation. If yields can be maintained at about their current levels it will mean that less acres will be needed to produce the required production and thus agriculture as a whole will be more efficient in its use of land, labor, and equipment.

In planning the 1943 program, greater emphasis has been placed on those practices which will contribute the most toward increased production in 1943 and the years immediately following. Certain practices for which large sums have been expended in the past years have been eliminated in accordance with a definite policy of not paying for practices which are becoming routine.

Farmers are confronted with many varied problems in shifting to the production of war crops. Through the establishment of individual farm goals, community committeemen help to meet these problems. They may appeal to the farmer's patriotism to induce the necessary shifts of production, they may provide him with information which will assure success in the new enterprise and thus avoid waste of vital production of facilities, and they can encourage actions toward achieving the best possible balance between all needed farm commodities.

The following table compares 1942 and 1943 goals with reported production for 1941 and 1942:

Production Goals - 1942 & 1943

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Commodity	Unit	1941 Reported (Thousands)	1942 Goal (Thousands)	1942 Reported (Thousands)	1943 Goal (Thousands)	1942 as % of Goal	1943 as % of Goal
Wheat	Aeres	62,404	55,000	53,427	52,500	88%	98%
Rye b/	Aeres	3,498	3,550	3,868	3,600	101%	93%
Rice	Aeres	1,257	1,320	1,481	1,380	105%	93%
Corr.	Aeres	87,164 ^{a/}	93,750	91,098	95,000	108%	104%
Oats	Aeres	39,363	40,000	40,600	37,300	102%	92%
Barley	Aeres	15,080	16,000	18,193	18,000	106%	99%
Grain Sorghum	Aeres	9,397	10,000	9,221	10,000	106%	108%
Hay, All b/	Aeres	71,893	72,000	72,710	71,100	101%	98%
Flaxseed	Aeres	3,367	4,500	4,675	5,000	134%	107%
Soybeans, for beans b/	Aeres	5,855	9,000	10,900	10,500	154%	93%
Peanuts	Aeres	1,989	5,000	4,173	5,500	254%	133%
Dry beans	Aeres	2,304	2,600	2,376	2,800	113%	118%
Dry peas	Aeres	384	665	530	665	173%	125%
Cotton	Aeres	23,132	25,000	24,005	22,500	108%	91%
Tobacco:							
Flue-cured	Aeres	718	841	796 ^{c/}	841	117%	103%
Farley	Aeres	343	383	356	421	112%	119%
Other Domestic	Aeres	251	272	246 ^{c/}	272	108%	110%
Sugar cane	Aeres	296	330	331	340	117%	103%
Sugar beets	Aeres	757	1,050	1,061	1,050	139%	99%
Potatoes	Aeres	2,794	3,060	2,845	3,160	110%	111%
Sweet potatoes	Aeres	759	850	757	757	112%	107%
Commercial Truck Crops g/	Aeres	1,680	1,840	1,738	1,720	110%	99%
Hay Crop Seeds	Aeres	3,869	4,919	3,339	4,709	127%	141%
Hemp	Aeres	- - -	- - -	- - -	300	- - -	- - -
Fruit (fresh)	Aeres	14,550	15,018	15,271	14,610	103%	96%
Cattle and Calves	Lbs d/	9,129,000	9,585,000	10,160,000	10,910,000	105%	107%
Sheep and Lambs	Lbs	925,000	940,000	1,009,000	990,000	102%	98%
Hogs	Lbs	9,451,000	11,125,000	10,800,000	13,800,000	118%	127%
Lard	Lbs	2,282,000	2,820,000	2,500,000	3,400,000	124%	136%
Milk	Lbs	115,498,000	125,000,000	130,000,000	122,000,000	108%	102%
Eggs	Doc e/	3,480,498	4,200,000	4,414,000	4,780,000	121%	108%
Chickens	Lbs d/	2,722,000	3,118,000	3,118,000	4,000,000	115%	128%
Turkeys	Lbs	455,000	500,000	485,000	560,000	110%	115%
a/ Midpoint of range							
b/ Harvested Acres							
c/ Allotment same as 1942, acreage expected same as 1942							
d/ Dressed weight							
e/ Total production							
f/ Figure for Sugar and Seed							
g/ Fresh market shipments							

(b) PARITY PAYMENTS

Appropriation Act, 1943	(a)
Proposed transfers in the 1944 estimates to other appropriations (see Budget schedules for details)	\$ -265,943
Budget estimate, 1944	<u>193,623,000 (b)</u>
Increase (including decrease of \$41,648 travel funds returned to surplus)	<u>+193,888,943</u>

(a) The Department of Agriculture Appropriation Act, 1943, reappropriated the unobligated balances of the appropriations made for parity payments by the Department of Agriculture Appropriation Acts for the fiscal years 1941 and 1942 and authorized and directed the Secretary to make such additional commitments or incur such additional obligations as might be necessary in order to provide for full parity payments for the crop year 1942. Obligations incurred pursuant to such authorization and directive are estimated at \$193,623,000 for which an appropriation is requested in the estimates for 1944. While the sum of \$193,623,000 will be provided in the 1944 Appropriation Act, it is proposed that it be merged with and made a part of the appropriation provided by the Department of Agriculture Appropriation Act, 1943.

(b) The Budget estimate of \$193,623,000 for 1944 is based upon information available on December 20, 1942, with regard to farm prices and parity prices for the 1942 crops. This amount is subject to increase or decrease depending upon the relationship between farm prices and parity prices which exist when the rates of payment for the crop year 1942 are finally determined in March or April 1943.

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
Parity payments to farmers under Section 303 of the Agricultural Adjustment Act of 1938	207,278,087	190,293,000	9,250,000	-181,043,000
Administrative expenses	3,324,788	3,330,000	3,330,000	- -
Allotments and transfer to agen- cies cooperating in parity programs (see Budget schedules for details)	513,643	465,435	365,310	-100,125
Total obligations, parity program	211,116,518	194,088,435	12,945,310	-181,143,125
Allotments and transfers made to cooperating agencies in 1942 from the 1941-1943 parity appropriation	-390,423	- -	- -	- -
Allotments and transfers made to cooperating agencies in 1943 from the 1942-1944 parity appropriation	+315,435	-315,435	- -	+315,435
Allotments and transfers made to cooperating agencies in 1944 from the 1943-1945 parity appropriation	- -	+365,310	-365,310	-730,620
Obligations incurred in 1942 against 1941-1942 parity appropriation	-7,938,186	- -	- -	- -
Obligations incurred in 1943 against 1942-1944 parity appropriation	+7,750,000	-7,750,000	- -	+7,750,000
Obligations incurred in 1943 against 1943-1945 parity appropriation	- -	-181,043,000	+181,043,000	+362,086,000
Unobligated balance 1942-1944 parity appropriation re- appropriated for 1943-1945 parity payments	+873,104	-873,104	- -	+873,104
Unobligated balance 1941-1943 parity appropriation reappro- priated for 1943-1945 parity payments	- -	-4,779,797	- -	+4,779,797
Covered into Treasury from 1943- 1945 parity appropriation in accordance with Public Law 674	- -	+41,648	- -	-41,648
Total available	211,726,448	-265,943	193,623,000	+193,888,943
Transfers in estimates to other appropriations (see Budget schedules for details)	+273,552	+265,943	- -	- -
Total estimate or appropria- tion	212,000,000	- -	193,623,000	

INCREASES

The apparent increase of \$193,888,943 in this appropriation consists of \$41,648 decrease in travel funds (returned to surplus in 1943) and:

(1) An apparent increase of \$193,930,591. This apparent increase, as indicated above, is due to the fact that there was no direct appropriation provided for parity payments in the Department of Agriculture Appropriation Act, 1943. Provision was made therein to reappropriate for the fiscal year 1943 the unobligated balances of the appropriation made for "Parity payments" for the fiscal years 1941 and 1942, and the Secretary was authorized and directed to make such commitments or incur such obligations as might be necessary to provide for full parity payments for the crop year 1942. Pursuant to such directive, it is now estimated that \$193,623,000 in addition to estimated unobligated balances aggregating \$5,652,901 will be required to provide for full parity payments and administrative expenses incident thereto for the crop year 1942, which amount is proposed to be merged with and made a part of the 1943 appropriation.

The 1943 and 1944 parity payment authorizations now proposed would be for the purpose of making up the disparity between the farm price and the parity price of the 1943 and 1944 crops. Eligibility for such payments would be contingent upon compliance with the 1943 and 1944 agricultural conservation programs. Accordingly, no direct appropriation is provided in the 1944 Budget for payments in connection with the 1943 and 1944 crop, but the language would authorize the Secretary to assure producers that such payments would be appropriated for and made at the appropriate time. It is, of course, impossible to estimate at this time how much of a direct parity payment appropriation would be needed for the 1943 and 1944 payments.

CHANGES IN LANGUAGE

The explanations of the Budget changes in the language of this item are based upon the manner of presentation employed in the subcommittee print rather than the method used in the Budget document. The subcommittee print not only accurately reflects the Budget recommendations in every detail, but does so in a manner more adaptable to the uses of the Committee. The new language is underscored, and deleted matter is enclosed in brackets:

To enable the Secretary to make full parity payments for the crop year 1942 pursuant to the authorization under this head in the Department of Agriculture Appropriation Act, 1943, \$193,623,000, to remain available until June 30, 1945, and to be merged with and made a part of the appropriation under this head in said Act, and the unobligated balance of appropriation so merged shall remain available until June 30, 1946, for administrative expenses (including expenses of county and local committees), and not to exceed \$5,000,000 of said unobligated balance may be expended for administrative expenses in the District of Columbia (including

personal services) and elsewhere (excluding expenses of county and local committees), including such part of the total expenses of making acreage allotments, establishing normal yields, checking performance, and related activities in connection with wheat, cotton, corn, rice, and tobacco under the authorized farm program as the Secretary finds necessary to supplement the amount provided in section 392 of the Agricultural Adjustment Act of 1938.

The second proviso contained under this head in the Department of Agriculture Appropriation Act, 1943, is amended to read as follows: "Provided further, That such payments with respect to any such commodity shall be made upon the normal yield of the farm acreage allotment established for the commodity under the 1942 agricultural conservation program and shall be made with respect to a farm in full amount only in the event that the acreage planted to the commodity for harvest on the farm in 1942 was not in excess of the farm acreage allotment established for the commodity under said program, and, if such allotment has been exceeded, the parity payment with respect to the commodity shall be reduced by not more than 10 per centum for each 1 per centum, or fraction thereof, by which the acreage planted to the commodity is in excess of such allotment."

The first paragraph appropriates \$193,623,000 for meeting the obligations for making full parity payments on 1942 crops incurred pursuant to the authorization contained in the Department of Agriculture Appropriation Act, 1943, and makes the unobligated balance of such appropriation available until June 30, 1946, for administrative expenses, including expenses of county and local committees. It also provides, as was done in the 1943 Act, that not to exceed \$5,000,000 of said unobligated balance shall be available for administrative expenses in the District of Columbia and elsewhere, exclusive of county and local committee expenses, including costs of making acreage allotments, establishing normal yields, etc.

The second paragraph amends the second proviso of "Parity payments" item as carried in the 1943 Act so that payments on the 1942 crop will be made on the basis of the normal yield of the farm acreage allotment established under the 1942 agricultural conservation program and in full amount only if the acreage planted was not in excess of the allotment under the 1942 program, rather than on the basis of the 1943 program. Thus, all factors relating to the parity payments on the 1942 crop would be based on the crop year 1942.

To enable the Secretary [of Agriculture] to make parity payments to producers of wheat, cotton, corn (in the commercial corn-producing area), rice, and tobacco, pursuant to the provisions of section 303 of the Agricultural Adjustment Act of 1938, [there are hereby reappropriated the unobligated balances of the appropriations made under this head by the Department of Agriculture Appropriation Acts for the fiscal years 1941 and 1942, to remain available until

June 30, 1945, and the Secretary] he is authorized and directed to make such [additional] commitments or incur such [additional] obligations as may be necessary in order to provide for full parity payments for [the crop year 1942] each of the crop years 1943 and 1944:

This part of the language authorizes the Secretary to make such commitments or incur such obligations as may be necessary in order to provide full parity payments for the crop years 1943 and 1944.

Provided, That such payments with respect to any such commodity for the crop year 1943 shall be made upon the normal yield of the farm acreage allotment established for such commodity under the 1943 agricultural conservation program and for the crop year 1944 on the normal yield of the farm acreage allotment established for the commodity under the 1944 agricultural conservation program: [Provided, That of the amounts hereby made available, not to exceed \$5,000,000 may be expended for administrative expenses in the District of Columbia (including personal services) and in the several States (exclusive of expenses of county and local committees), including such part of the total expenses of making acreage allotments, establishing normal yields, checking performance, and related activities in connection with wheat, cotton, corn, rice, and tobacco under the authorized farm program as the Secretary finds necessary to supplement the amount provided for in section 392 of the Agricultural Adjustment Act of 1938, as amended:] Provided further, That for each of the crop years 1943 and 1944 such payments with respect to any such commodity shall be made with respect to a farm in full amount only in the event that the acreage planted to the commodity for harvest on the farm in 1943 or 1944, as the case may be, is not in excess of the farm acreage allotment established for [the] such commodity under the agricultural conservation program, and, if such allotment has been exceeded, the parity payment with respect to the commodity shall be reduced by not more than 10 per centum for each 1 per centum, or fraction thereof, by which the acreage planted to the commodity is in excess of such allotment [.] , and the [The] Secretary may also provide by regulations for similar [deductions] reductions for the crop years 1943 and 1944, respectively, for planting in excess of the acreage allotment for the commodity on other farms or for planting in excess of the acreage allotment or limit for any other commodity for which allotments or limits are established under the agricultural conservation program on the same or any other farm.

[If] For payments on the 1943 crop, if the sum of the prevailing basic loan rate (if marketing quotas for the commodity have been disapproved, such basic loan rate shall be the basic loan rate which would have prevailed except for such disapproval) or the average farm price, whichever is the higher, for the crop year [1942] 1943 and the applicable rate of the payments under the

Soil Conservation and Domestic Allotment Act, for the purposes of the [1942] 1943 agricultural conservation [program] program, and the parity payments herein provided, exceed an amount sufficient to increase the farmers' returns to parity prices, parity payments shall be so adjusted as to provide a return to producers which is equal to but not greater than parity price; and for payments on the 1944 crop, if the sum of the prevailing basic loan rate (if marketing quotas for the commodity have been disapproved, such basic loan rate shall be the basic loan rate which would have prevailed except for such disapproval) or the average farm price, whichever is the higher, for the crop year 1944 and the applicable rate of the payments under the Soil Conservation and Domestic Allotment Act, for the purposes of the 1944 agricultural conservation program, and the parity payments herein provided exceed an amount sufficient to increase the farmers' returns to parity prices, parity payments shall be so adjusted as to provide a return to producers which is equal to but not greater than parity price.

This part of the language provides that the payments with respect to the 1943 and 1944 crop years shall be computed in the same manner as the payments to be made on the 1942 crop. Specifically, payments for each of the years 1943 and 1944 are to be based on the normal yield of the farm acreage allotment established under the conservation program for the same year; payments are to be made in full amount only if the acreage planted to the commodity is not in excess of the farm acreage allotment established under the conservation program for the applicable year, with the same penalty provisions on overplanting as are in force in connection with 1942 payments; and finally, the provisions with respect to including conservation payments in the parity computation are extended to apply to the payments to be made on the 1943 and 1944 crops.

WORK UNDER THIS APPROPRIATION

Objective: The objective of the parity program is to provide farmers, by means of making parity payments to the extent possible with the funds available, with parity returns on their normal production of wheat, cotton, corn, rice, and tobacco. This carries out the provisions of Section 303 of the Agricultural Adjustment Act of 1938.

Progress and Current Program: The Agricultural Adjustment Act of 1938, as amended, provides (1) that parity payments shall be made to producers of corn, wheat, cotton, rice, or tobacco on their normal production of such commodities in amounts which, together with the proceeds thereof, will provide a return to such producers which is as nearly equal to parity price as the funds appropriated will permit; and (2) that all funds available for such parity payments shall be apportioned among these commodities in proportion to the amount by which each fails to reach the parity price.

The Agricultural Adjustment Agency is now making payments under the 1942 parity payment appropriation on corn, wheat, and some types of tobacco. The rates of these payments in accordance with the provisions of the 1942 appropriation act do not exceed the amount by which parity price for the particular crop for 1941 exceeded the sum of (1) the basic loan rate or the average farm price, whichever is the higher, for that crop for 1941, and (2) the applicable rate of payment under the 1942 agricultural conservation program. The amount of payment is computed by multiplying the 1942 acreage allotment and normal yield by the rate determined above. Such payments are contingent upon compliance with 1942 acreage allotments as specified in the appropriation act. The rates and amounts of these payments under the 1942 parity payment appropriation are as follows:

	<u>Unit</u>	<u>Rate</u>	<u>Amount</u>
Corn	Bu.	11.1¢	\$118,327,000
Wheat	Bu.	13.5¢	78,827,000
Tobacco, certain cigar types	Lb.	.7¢	846,000
Estimated total			<u>198,000,000</u>

Under the 1943 parity payment appropriation, the Secretary is authorized and directed to incur obligations towards making full parity payment on the 1942 crop. The rates of such payments, which will be determined in March or April of 1943, will be the amount by which parity price for the commodity for the 1942 crop year exceeds the sum of (1) the basic loan rate or the average farm price, whichever is the higher, for that crop for 1942, and (2) the applicable rate of payment under the 1942 agricultural conservation program. The amount of payment will be computed by multiplying the 1942 acreage allotment and normal yield by the rate determined above. The 1943 parity payment appropriation provided for reductions in this payment if the farm acreage allotment for 1943 is overplanted; however, since the payment is proposed to be made to those persons farming in 1942, and since all other factors are based upon the 1942 crop or crop year, it is proposed in the 1944 Budget that the 1943 Act be amended so that such penalties for overplanting will be with respect to the 1942 crop instead of the 1943 crop.

Based upon the estimated 1942-1943 season average parity price (parity price as of November 15, 1942 used is estimate of season average), the indicated parity payment rates and amounts needed for parity payments (excluding administrative expense) on the 1942 crop are as follows:

	<u>Unit</u>	<u>Rate</u>	<u>Amount</u>
Corn	Bu.	9.7¢	\$106,686,000
Wheat	Bu.	13.1¢	73,975,000
Tobacco, Cigar	Lb.	.45¢	382,000
			<u>181,043,000</u>

The local administration of the parity payment programs is accomplished under the direction of state, county and community committees which administer the agricultural conservation program, and the farm acreage allotments and normal yields established under the conservation program are also used as a basis for determining performance under the parity payment programs.

(c) ADMINISTRATION OF THE SUGAR ACT

Appropriation Act, 1943	\$47,462,910
Proposed transfers in 1944 estimates to other appropriations (see Budget schedules for details)	-106,463
Total available, 1943	47,356,447
Budget estimate, 1944	63,883,060
Increase (including decrease of \$10,477 travel funds returned to surplus)	+16,526,613

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
Conditional payments to sugar producers	\$46,930,797	\$55,728,378	\$54,138,030	-\$1,590,348 (1)
Administrative expenses, Agricultural Conservation and Adjustment Administration	725,833	710,111	713,139	+3,028 (2)
Allotments and transfers to agencies cooperating in the Sugar Program (see Budget schedules for details)	38,045	56,990	31,891	-25,099 (2)
Total obligations, Sugar Program	47,694,675	56,495,479	54,883,060	-1,612,419
1942 appropriation available in 1943	+149,509	-149,509	- -	+149,509 (3)
1944 appropriation available in 1943	- -	-9,000,000	+9,000,000	+18,000,000 (4)
Covered into Treasury in accord- ance with Public 674	- -	+10,477	- -	-10,477
Total available	47,844,184	47,356,447	63,883,060	+16,526,613
Transfers in estimates to other appropriations (see Budget schedules for details)	+118,726	+106,463	- -	-
Total estimate or appropriation ..	47,962,910	47,462,910	63,883,060	

INCREASES AND DECREASES

The increase of \$16,526,613 in this appropriation for 1944 consists of a decrease of \$10,477 in travel funds (returned to surplus in 1943) and:

- (1) A decrease of \$1,590,348 in conditional payments to sugar producers resulting from anticipated reduction in production of sugar beets and Puerto Rican sugarcane.
- (2) A reduction of \$22,071 in administrative expenses, including allotments and transfers to agencies cooperating in the sugar program.
- (3) An apparent increase of \$149,509 resulting from the fact that \$149,509 of the 1942 appropriation was used during the fiscal year 1943 thereby reducing by that amount the charges to the 1943 appropriation. No such unobligated balance of the 1943 appropriation will be available for use during the fiscal year 1944.
- (4) An increase of \$18,000,000 in conditional payments to sugar producers for the fiscal years 1943 and 1944, due to the change made in the base rate of payment from 60 cents to 80 cents per hundred pounds of sugar or liquid sugar, raw value, by Public Law 386, 77th Congress, approved December 26, 1941. Of the increase of \$18,000,000 in 1944, \$9,000,000 is to cover obligations incurred pursuant to Public Law 674 during the fiscal year 1943 and \$9,000,000 is to cover obligations to be incurred pursuant thereto in 1944.

CHANGES IN LANGUAGE

In addition to the usual changes in year dates, the estimates include proposed changes in language as follows (new language underscored, deleted matter enclosed in brackets):

**** To remain available until June 30, [1944] 1945, and in addition, \$9,000,000 to be immediately available and to remain available to June 30, 1944, and to be merged with and made a part of the appropriation under this head in the Department of Agriculture Appropriation Act, 1943

The effect of the language added to this item is to appropriate \$9,000,000 to be immediately available and to remain available until June 30, 1944, and to be merged with and made a part of the appropriation provided under the head "Sugar Act" in the Department of Agriculture Appropriation Act, 1943. This amount is needed to make conditional payments to producers pursuant to Public Law 386, in which the basic rate was increased from 60 to 80 cents per hundred pounds.

WORK UNDER THIS APPROPRIATION

General: This appropriation is used for carrying into effect the provisions of the Sugar Act of 1937, approved September 1, 1937 (50 Stat. 903-916), as extended by Public Law 860, approved October 15, 1940, and Public Law 386, approved December 26, 1941. Pursuant to Title IV of this Act, excise taxes amounting to approximately \$68,000,000 in normal times are collected annually through the Treasury Department. However, under the current rationing and restricted

marketings of sugar, not more than \$55,000,000 can be expected to be collected. Appropriation for each fiscal year of a sum not to exceed \$55,000,000 for the purposes of administration of this Act is authorized by Section 502 of the Act.

Objective: To carry out the provisions of the Sugar Act of 1937, as amended.

- (1) Through conditional payments to maintain continental production and, if possible, to increase production to the goals set by the Secretary.
- (2) To assure the United States of sufficient supplies of sugar to meet the rationing requirements under the Federal rationing program.
- (3) To exercise all powers of the Secretary under the Sugar Act which will be of assistance to the Food Distribution Administration and the Food Production Administration in carrying out the wartime controls and programs provided for in Executive Order 9280 dated December 6, 1942, and to provide for restoration of the quota provisions of the Sugar Act when required under these provisions.

Progress and Current Program:

Developments in 1941-42: It was apparent late in the summer of 1941 that the extraordinarily large takings of sugar by all types of consumers in the United States during 1941 would greatly reduce the record stocks of sugar with which the areas supplying this market began the year. Moreover, indications pointed to increased difficulties, because of the need for diverting ships to the transport of more urgently needed war materials, in getting sugar here from the Philippines and other offshore areas. Consequently, it was announced that limitations on sugar production by growers receiving payments under the sugar program would not be needed in any domestic area during 1942.

Sugar legislation extended: It also became clear that two vitally important steps would be necessary to encourage domestic sugar production in 1942. The first of these measures was continuance of the protection afforded domestic producers by the quota system authorized by the Sugar Act of 1937, which was to expire on December 31, 1941, in order to protect them against a post-war collapse of prices when large stocks of sugar in offshore domestic and foreign areas could again move freely to the United States. Since the season price of the sugar beets produced in 1942 would not be ascertained until the close of the marketing year in September of 1943, it appeared unfair to ask growers to take the risk of planting the crop without the protection of the sugar program. The probability of increased labor and other production costs indicated the need for an increase in the Federal payments under the sugar program as the second step. Consequently, when the Congress began consideration of sugar legislation.

in the latter part of 1941, the Department gave its support both to extending the Sugar Act for a period of three years, and to increasing the basic rate of payments under this statute by 33-1/3 percent in order to meet certain transitory conditions connected with the agricultural situation in several of the domestic sugar producing localities. Public Law 386, 77th Congress, embodying these and other amendments, was passed by the Congress and approved by the President on December 26, 1941. One of these amendments extended the benefits of the sugar payment program to the Virgin Islands.

Record beet acreage planted: As a result of the reassurance given domestic sugar producers by the continuance of the protection of the sugar program, and of the incentive provided by the larger Government payments on an unrestricted output, as well as by higher sugar prices, a record acreage was planted to sugar beets while sugarcane plantings in the mainland cane area were also increased substantially. However, sugar growers experienced many difficulties in the production of the 1942 crop. The principal of these difficulties was the serious shortage of labor, a problem which the Department, in cooperation with other Federal agencies endeavored to solve, in part, by the transport of harvest workers from surplus to scarcity areas, and by the movement of workers from Mexico to beet fields in this country. There was also the serious transportation problem brought about by the shortage of tires.

Consumers protected by price control and rationing: The large-scale diversion of vessels to the carrying of vital war products and the intense submarine warfare in the Caribbean greatly curtailed sugar shipments from the domestic and foreign offshore areas. The resultant reduction in total sugar supplies in this country made inevitable some limitation on domestic sugar consumption, while widespread increase in purchasing power made price control essential for the protection of the great majority of consumers. It is obvious that if the price of sugar had not been restricted and the commodity had not been rationed, those in the community less favored financially would have been compelled to exercise great economy in the use of sugar, while the more favored would have been able to continue consuming the quantities to which they had been accustomed. The application of a ceiling price made it possible for all to buy, while rationing assured each person a fair share of the available sugar supplies.

Sugar quota system suspended: The sugar quota system was suspended on April 13, 1942 by President Roosevelt, in accordance with the Department's recommendation under Section 509 of the Sugar Act of 1937. However, since shipping facilities were not available for the movement of additional quantities of sugar from foreign areas, the action had little immediate significance. This was the third occasion since World War II started that recourse was necessary to the emergency provisions of Section 509. The quota system was first suspended on September 11, 1939, and was reinstated on December 26 of the same year.

1942 Cuban sugar crop bought: War conditions necessitated other extraordinary measures for handling the sugar situation during the year under review. On December 30, 1941, it was announced that arrangements had been concluded for the purchase of the 1942 Cuban sugar crop by the Defense Supplies Corporation. The Sugar Agency took an active part in helping to complete this transaction.

Insular food production stimulated by sugar program: The great reduction in the number of vessels bringing sugar from, and carrying foodstuffs to, Puerto Rico created two extremely serious problems for this insular area. One of these was an unusually large accumulation of sugar stocks in the Island. The second critical problem was the reduced food supply of Puerto Rico. It should be noted that approximately 35 percent of Puerto Rico's food requirements on a quantitative basis are normally brought in from the continental United States. For example, in 1940 about 327,000 tons of food were imported from the mainland, rice, flour, pork products, beans and codfish, representing about two-thirds of the total. Therefore, in order to help in providing at least part of the local supplies of foodstuffs an extremely important change in the sugar program for the Island was made in 1942. This change provided that instead of applying, as in other years, chemical fertilizer, Puerto Rican growers wishing to receive payments under the sugar program would have to plant to soil-conserving food crops an acreage equal to not less than 7 percent of the land on which sugarcane was growing on June 30, 1942. Food production in the Virgin Islands during the 1942 crop year was similarly stimulated.

Basic data supplied to war agencies: During the latter part of 1941 and the beginning of 1942, the Sugar Agency furnished weekly statistical data to the War Shipping Administration on the supply position of sugar refiners on the Atlantic and Gulf Coasts in order to make possible, by the appropriate routing of vessels, the equitable allotment of the reduced offshore sugar supplies to such refiners, as well as to protect consumers in the areas primarily dependent on sugar from insular regions. Later, at the request of the War Production Board and the Office of Price Administration, and by arrangement of the Bureau of the Budget, it furnished these agencies with the statistical data needed by them to operate their sugar allotment and rationing programs, thus making it unnecessary for each agency to gather identical information. The data collected and compiled by the Agency include weekly reports relative to raw and refined sugar stocks, deliveries, arrivals, production, etc. by all primary distributors, showing the actual location of sugar supplies and the states in which the sugar was delivered.

Income Position of Sugar Producers:

Sugar beet growers: The income of sugar beet growers from the 1941 crop is expected to average about \$8.33 per ton of beets, including conditional payments, compared with \$7.10 per ton for the

1940 crop. These figures do not include the special conditional payments which the Act authorizes in cases of acreage abandonment or crop deficiency due to freeze, drouth, insects, disease, or other natural disaster. This partial crop insurance, which domestic sugar growers did not enjoy prior to the sugar programs, every year prevents serious financial losses to a large number of sugar beet farmers. The total income of these growers for the 1941 crop of 10,311,000 tons of sugar beets is expected to be about \$85,890,000, or only slightly less than the \$87,273,000 received for the 1940 crop of 12,292,000 tons of beets. Conditional payments included in these totals amounted to \$18,885,000 and \$22,700,000 for the 1941 and 1940 crops, respectively.

Louisiana cane growers: The total income of Louisiana growers from the 1941 sugarcane crop of 3,978,000 tons amounted to about \$19,890,000 or approximately \$5.00 a ton, excluding abandonment and deficiency payments, as compared with about \$10,600,000 and \$3.62, respectively, from the 1940 crop of 2,925,000 tons of sugarcane, which had been severely damaged by freeze and floods. Conditional payments included in the 1941 total income amounted to approximately \$3,700,000 or \$1,100,000 more than in the case of the 1940 crop. In 1940, however, additional payments totaling about \$775,000 were made to growers for abandonment and deficiency due to the damage mentioned.

Florida cane growers: Florida sugarcane growers, exclusive of the processor-producers who raise about 83 percent of that state's crop, received a total income of approximately \$5,533,500, about \$5.10 per ton of cane on the 1941 crop, compared with approximately \$4,291,800 or about \$4.60 per ton in the previous season. The Florida crop of the 1941-42 season totaled 1,085,000 tons of sugarcane, compared with 933,000 tons in the previous season, an increase of more than 16 percent.

Hawaiian and Puerto Rican growers: Because of the higher sugar prices which prevailed in 1941, the total return from the crop produced that year in Hawaii was somewhat higher than that received in the previous season. The income from the 1941 crop included about \$8,600,000 in conditional payments, as compared with \$8,851,541 on the 1940 crop.

In Puerto Rico the total income of growers from the 1941-42 crop of about 9,600,000 tons of sugarcane, the largest in the Island's history, was about \$58,000,000 compared with approximately \$44,300,000 from the crop of 1940-41. The 1941-42 income includes sugar program payments of about \$12,000,000, as compared with Government payments of \$9,566,134 on the 1940-41 crop.

Administration of conditional payment programs: The Sugar Act of 1937 authorizes payments to growers complying with certain conditions, including the paying of fair wages to field workers, refraining from employing child labor, carrying out soil-conserving practices, and complying with their farm allotments (known under this legislation as proportionate shares). Producers who are also processors and who wish to qualify for such payments must, furthermore, pay fair prices for cane

or beets bought from other growers. The Act requires that public hearings and investigations be held prior to the establishment of fair wages and fair prices by the Secretary.

Minimum wages: Minimum wages in all the domestic sugar producing areas, except Hawaii, during 1942 were increased substantially, chiefly because of higher sugar prices, increased Government payments, rises in general agricultural wages, and increased cost of living.

The minimum rates for sugar beet field laborers during 1942 averaged about 26 percent above those prevailing in the previous season. The rates for the early season work were announced March 16 and provided for an increase of about 22 percent over the 1941 wages, the increases ranging from \$2.00 to \$3.50 per acre. On April 9, the harvesting rates were issued and these represented an average increase of 30 percent over the 1941 rates. Specifically, the harvesting rates were increased 25 cents per ton of beets in all districts except California and northern Montana where, in general, the increases amounted to 30 cents per ton.

The minimum wages established for laborers in the production and cultivation of sugarcane in the mainland cane area in 1942 were from 25 to 45 cents per day higher than on the four immediately preceding sugarcane crops. The basic wage rates in Louisiana were increased from \$1.20 to \$1.50, and in Florida from \$1.60 to \$2.00 per 9-hour day, or 25 percent. The harvesting rates established on October 1, 1941, and which were effective until June 30, 1942, were approximately 10 percent higher than those for the three preceding years.

In Puerto Rico basic wage rates were lifted 30 cents per 8-hour day over 1941. A bonus system, which becomes effective when the price of raw sugar exceeds \$3.749 per hundred pounds, will further increase grinding season wages by 10 cents, and those for the "dead season" by 5 cents for each 25-point increase in the price of sugar up to \$4.499. During 1941 the bonus system did not apply to the dead season. These increases are in general accordance with the principles established in the collective agreements signed by two of the three Puerto Rican labor organizations and the organized producers.

The existence of martial law in Hawaii and the resultant action of the military governor in freezing all wages on the Island of Oahu prevented any change in the rates for sugar field laborers there. However, it was possible to embody a bonus in the wage determination, based on the price of sugar, to be applied on the monthly earnings of the workers. It was also provided that any producer was entitled to appeal to the Secretary for a modification of the bonus payment in the event such payment, because of the war, worked an undue hardship on him or seriously prevented the production of sugarcane on the farm. A bonus system was voluntarily established in 1941 by Hawaiian cane sugar producers.

The Hawaiian bonus provided for in the 1942 wage determination is at the rate of 10 percent upon the straight time earnings of workers when the average New York daily market price per ton of 96° sugar, Hawaiian base, reaches \$65 per ton, and the rate is increased 1/2 of 1 percent for each dollar increase above \$65. When the price reaches \$120 per ton, no further increases are to be made.

The first wage determination for the Virgin Islands under the sugar programs was issued in the summer of 1942. Prior to the amendment of the Sugar Act of 1937 in December of 1941, the conditional payment provisions of the legislation did not apply to these possessions of the United States. The initial wage determination provided for minimum wages per 8-hour day of \$1.04 for the production and cultivation of sugarcane and \$1.36 for harvesting operations. In 1941 the prevailing daily wage for all harvesting operations, as well as for the most efficient workers in production and cultivating operations, was \$1.04, while most of the less efficient laborers were paid about 88 cents and some, including children, as low as 50 cents per day.

Farming practices: In order to stimulate increased plantings of sugar beets and sugarcane, as well as the so-called war crops in the mainland sugar-producing areas, certain changes from previous years were made in the farming practice requirement for these areas in 1942. In the continental sugar beet area, the required soil-conserving practices, such as the seeding or maintenance of legumes or grasses, plowing under of green manure crops, and application of animal or chemical fertilizers to the soil, were the same as those for the 1941 crop, but the amount of such practices needed to qualify for Government payments was cut in half.

The farming practices in the mainland cane sugar area were also liberalized for the same reason. Consequently, the farming practice determination called for an acreage of soil-building practices equal to not less than 15 percent, as compared with 30 percent in previous years, of the acreage of sugarcane for sugar growing on the farm for harvest in 1942. In liberalizing the requirements positive encouragement was given to the production of sorgo, syrups, and molasses for conversion into industrial alcohol needed for the war effort.

Because of the difficulty Hawaiian sugar planters were continuing to experience in securing fertilizer, as a result of war restrictions on materials and shipping, the 1942 farming practice requirement in the Territory was maintained at the reduced levels made effective at the end of 1941. This downward adjustment provided that the minimum amount of plant food in chemical fertilizer required to be applied per acre of sugarcane land would be the greater of 100 pounds per acre, or 60 percent of the amount applied in 1940 or 1941 whichever is smaller. It was believed that such an amount would sufficiently preserve the fertility of the soil, since experimental work conducted by various plantations had indicated some Hawaiian plantations were applying more fertilizer than was necessary. The acreage on which fertilizer was to be applied was not to be less than 80 percent of the number of acres on the farm on which sugarcane was planted, or a stubble crop of sugarcane started, at any time during 1942.

Reference has already been made to the important change made in the farming practice requirement for the 1942-43 sugarcane crop in Puerto Rico. This requirement provided that at least 7 percent of the land on which sugarcane was growing on June 30, 1942, be devoted to soil-conserving food crops, of which not less than four-fifths were to be leguminous crops. It was required, for soil protection reasons, that the plants or vines of such food crops be kept on the land. Where row crops were to be grown on land of more than 6 percent average slope, the planting and cultivating was to be carried out along lines deviating not more than 2 percent from contour lines.

Inasmuch as all the customary soil-conserving practices on the 1942 sugarcane crop in the Virgin Islands had already been completed when the conditional payment program was made applicable to the Islands, through the amendment of the Sugar Act in December of 1941, the Department's determination provided that the farming practices actually carried out would be deemed to meet this condition for payment. However, in the case of the 1943 crop growers were required, between August 1, 1942 and January 31, 1943, to plant soil-conserving food crops on at least 7 percent of the sugarcane land on which cane was growing July 31, 1942, and to meet the other practice specifications applicable to producers of the 1942-43 Puerto Rican sugarcane crop.

Proportionate shares for growers: Sugar production in the various domestic areas, continental and insular, during 1942 was unrestricted. Consequently, the proportionate share or allotment for each of the farms in continental United States was whatever acreage was planted to sugar beets or sugarcane to be marketed (or processed by the producer) for the extraction of sugar, and for each farm in the insular areas (Hawaii, Puerto Rico, Virgin Islands) it was all the sugar commercially recoverable from sugarcane grown and marketed (or processed by the producer) for sugar.

Fair prices for beets and cane: During the spring and summer of 1942 the Tariff Commission, at the request of the Department and the Office of Price Administration, conducted a field study to determine the cost of processing sugar beets, and of growing, processing and refining cane sugar in Puerto Rico. It is expected that these data will be useful to the OPA and the Department in connection with various sugar problems.

The Puerto Rican and Virgin Islands fair price determinations are the only ones issued since the last report. The Puerto Rican determination covered the 1941-42 sugarcane crop and provided for continuance of the basic features of the cane purchase agreements for the previous season. However, it also provided for certain changes in recognition of (1) the increased proceeds from the sale of molasses for industrial alcohol because of the war; (2) increased shipping and delivery expenses, and (3) the scarcity in storage and ocean shipping facilities.

Processor-producers were required to pay growers a molasses bonus of half the amount by which the net proceeds from the sale of 1941-42 crop molasses exceeded the 1940-41 income. The amount deducted by processors for shipping and selling expenses from the New York market price of raw sugar in fixing the price basis of settlement for sugarcane was not to exceed the smaller of (a) actual shipping and selling expenses incurred in 1942, or (b) 31 cents per cwt. of 960 raw sugar, plus the excess of 1942 shipping and selling expenses over those for 1941. However, any reimbursement of such expenses by any governmental agency had to be taken into consideration in arriving at the final f.o.b. mill basis used for settlement purposes.

When settlement with the grower was made by the delivery of sugar, the producer-processor was required to (1) store and insure such sugar free of charge to the grower (except in those instances in which outside storage facilities were utilized), and (2) to share with the grower all ocean shipping facilities.

The fair price determination issued for the Virgin Islands covered the 1942 crop and was the first for this area. It continued in effect the basic feature of the purchase agreements previously employed in the Virgin Islands area, namely, a cane liquidation on the basis of six pounds of sugar per hundredweight of cane, subject to certain modifications designed to bring the contract more nearly into conformity with the agreements used in other domestic areas, particularly Puerto Rico. The changes bring about a cane price somewhat higher than would result from the settlement method proposed by the Virgin Islands Company, the sole producer-processor in the area.

The 1943 sugar program: In view of the great need for shipping for the transport of more vital war materials, offshore areas should not be relied upon to furnish as large a quantity of sugar as in previous years. The production of sugar in Puerto Rico will necessarily be curtailed and the 1942-43 output expected to be approximately 850,000 tons, as compared with the 1941-42 figure of 1,155,000 tons. Production in Hawaii and the Virgin Islands will probably remain at the same level as in 1942. Despite the shortage of farm labor, difficulties in transportation, and the problem of obtaining certain types of equipment for the farm and mill, the production of sugar in the continental beet area in 1943 is now expected to be 1,750,000 tons, which, although smaller than that of 1942, is still considerably above the average for the past ten years. Were it not for the assurances given the beet sugar producers by the protection of the sugar program, production would undoubtedly fall far below that figure. It is estimated that the production of sugar from the 1943 sugarcane crops of Louisiana and Florida will be slightly increased over the high 1942 figure.

(d) ADMINISTRATION OF FEDERAL CROP INSURANCE ACT

Appropriation Act, 1943	\$8,572,954
Proposed transfers in the 1944 estimates to other appropriations (see Budget schedules for details)	-245,042
Total available, 1943	8,327,912
Budget estimate, 1944	7,818,748
Decrease (including decrease of \$42,537 travel funds returned to surplus)	-509,164

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Federal Crop Insurance Corpora- tion Field Offices: Approval of bases for crop insurance yield and premium rates in in- dividual counties; and account- ing for and verification of premiums collected and indemni- ties paid	\$986,319	\$1,337,853	\$1,171,226	(1) -\$166,627
2. Storage costs and other direct expenses incident to the acqui- sition, maintenance, and sale of commodity reserves (except transportation)	716,975	210,501	210,501	-
3. County agricultural conserva- tion associations of farmers: Collection of premiums and ad- justment of loss claims, collection of data for use in establishing crop insurance yield and premium rates, tak- ing and recommending for ap- proval applications for crop insurance	4,000,061	4,441,816	4,291,816	(2) -150,000
4. General administration, program: .. planning and direction, and supervision of purchase, stor- age, and sale of commodity re- serves	658,804	876,296	801,308	(3) -74,988

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
Covered into Treasury in accordance with Public Law 674	- -	42,537:	- -	-42,537
Continuing transfers to other appropriations and departments (see Budget schedules for details)	1,327,994:	1,418,909:	1,343,897:	(4) -75,012
Unobligated balance	+640,120:	- -	- -	- -
Total available	8,330,273:	8,327,912:	7,818,748:	-509,164
Transfers in estimates to other appropriations (see Budget schedules for details)	+229,554:	+245,042:	- -	
Total estimate or appropriation	8,559,827:	8,572,954:	7,818,748:	

INCREASES OR DECREASES

The decrease of \$509,164 in this item for 1944 consists of \$42,537 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$166,627 under the project "Federal Crop Insurance Corporation Field Offices: Approval of bases for crop insurance yield and premium rates in individual counties; and accounting for and verification of premiums collected and indemnities paid."

This decrease will be effected in expenses of branch offices handling the wheat crop insurance program. The branch offices at Spokane, Washington; Minneapolis, Minnesota; Kansas City, Missouri; and Richmond, Virginia, have been abolished and two branch offices, one at Denver, Colorado, and one at Chicago, Illinois, have been established.

(2) A decrease of \$150,000 under the project "County agricultural conservation associations of farmers: Collection of premiums and adjustment of loss claims, collection of data for use in establishing crop insurance yield and premium rates, taking and recommending for approval applications for crop insurance."

(3) A decrease of \$74,988 under the project "General administration, program planning and direction, and supervision of purchase, storage, and sale of commodity reserves."

This decrease will be effected by a reduction in man-years of work and other expenses in connection therewith.

(4) Transfers. The decrease of \$75,012 arises out of adjustments of allotments and transfers to cooperating agencies, as shown in the Budget schedules, for services related to the crop insurance program.

WORK UNDER THIS APPROPRIATION

Problem and Significance: Each year in various parts of the United States thousands of farmers suffer partial or total loss of their crops due to causes beyond their control. This has contributed very largely to their economic distress; has caused the loss of many farms, thereby making many farm families a burden on society and causing a shifting of farm population to cities. This shifting is even more significant in war time when so many good-paying jobs are available in factories and could easily lead to serious shortages of food and fiber crops so necessary to the war effort.

Objective: To help prevent the shifting of the farm population to cities and the possible serious shortages of food and fiber crops and the economic distress of farmers by guaranteeing them at least a partial return on the crops planted.

Plan and Progress of Work: Starting with the 1939 wheat crop and the 1942 cotton crop, insurance has been made available to the producers of wheat and cotton on a basis of guaranteeing to the producer a yield of 75 percent or 50 percent of his average yield. Actuarial data has been developed to currently maintain yield and premium rates in line with changing production conditions. The plan of operation has been brought to the farmers through their respective local state and county agricultural conservation committees. All of the local administration of the program is performed by these committees. The approval of the yields and rates, the accounting and auditing of the transactions, and the paying of indemnity claims are centralized in field offices of the Corporation located in Chicago, Illinois; Denver, Colorado for wheat; and in Birmingham, Alabama; and Dallas, Texas for cotton. The development and control is maintained in the central office located in the District of Columbia.

Crop insurance on wheat was offered for the first time on the crop harvested in 1939. 166,000 farms were insured for that year. The number increased until in 1942, 415,000 farms were covered, and a total of 1,310,000 farms were insured in the four years. When spring wheat applications are all filed for 1943, along with the winter wheat already filed covering 450,000 farms, an additional half-million farms will have been offered this protection. During the past four years, indemnities amounting to 62,380,000 bushels valued at \$45,410,000 were paid on 406,400 of these insured wheat farms where crop failures developed. This helped the insured farmers to continue to operate their farms and to retain their place as farmers in the food production program.

During the first year of the operation of the cotton insurance program, protection was given on 185,000 units, and as of December 31, 18,000 had filed claims for losses amounting to 48,000 bales, valued at \$4,680,000. Here, again, payment of these indemnities will help these farmers to continue production. It is estimated that 400,000 cotton farms will be insured in 1943, making a total of approximately 900,000 wheat and cotton farms where insurance protection will be in effect.

During these years up to and including 1942, farmers have paid premiums of 41,898,000 bushels of wheat valued at \$28,037,000 and 64,000 bales of cotton valued at approximately \$6,250,000.

Administration of Federal Crop Insurance Act

VOLUME OF WORK - WHEAT CROP INSURANCE PROGRAM

	1939 <u>Actual</u>	1940 <u>Actual</u>	1941 <u>Actual</u>	1942 <u>Actual</u>	1943 <u>Estimated</u>	1944 <u>Estimated</u>	Maximum <u>Estimated</u>
1. Number of applications received	165,775	379,710	420,939	393,342	400,000	500,000	.....
2. Number of farms covered by applications received	165,775	379,710	420,939	503,266	512,000	640,000	940,000
3. Number of contracts in force	165,775	360,496	371,468	344,413	360,000	440,000	1,200,000
4. Number of farms covered by contracts in force	165,775	360,496	371,468	443,754	452,000	565,000	48,000,000
5. Premiums collected (bushels)	6,670,316	13,776,866	12,645,866	8,787,132	10,400,000	12,700,000	42,000,000
6. Insured acreage	7,234,913	12,755,368	11,736,427	9,350,000	9,900,000	12,100,000	360,000,000
7. Insured production (bushels)	60,836,719	108,282,202	104,327,465	90,000,000	95,300,000	116,500,000	.....
8. Loss claims approved for payment (bushels)	55,932	112,763	130,731	106,933	Note	Note	Note
9. Indemnities approved for payment (bushels)	10,163,899	22,899,750	18,832,340	10,480,268	Note	Note	Note
10. Number of states writing crop insurance	31	33	36	36	36	36	36
11. Number of counties writing crop insurance	1,289	1,436	1,463	1,639	1,650	1,700	2,200
12. Number of states for which yield and rate data established	36	36	36	36	36	36	36
13. Number of counties for which yield and rate data established	1,810	1,820	1,822	1,925	1,998	2,000	2,200

The difference between applications received and contracts in force is due to cancellations, rejections, and no wheat seeded cases.

During the 1939, 1940, and 1941 programs a separate contract was written for each farm. Beginning with the 1942 program one contract is written covering all of the farms in one county owned or operated by one person.

Note: Not practical to forecast crop results for this statement.

Administration of Federal Crop Insurance Act
VOLUME OF WORK - COTTON CROP INSURANCE PROGRAM

	1942 <u>Estimated</u>	1943 <u>Estimated</u>	1944 <u>Estimated</u>	Maximum <u>Estimated</u>
1. Number of insurance or production units insured	185,000	400,000	500,000	1,500,000
2. Premiums collected (pounds of lint)	32,000,000	73,640,000	92,050,000	275,070,000
(bales)	64,000	147,280	184,100	553,000
3. Insured acreage (gross)	2,052,491	4,744,000	5,930,000	18,000,000
4. Insured production (bales of lint cotton)	974,000	2,250,000	2,810,000	8,500,000
5. Loss claims approved for payment	18,000 <u>1/</u>	Note	Note	Note
6. Indemnities approved for payment (pounds of lint)	24,000,000 <u>1/</u>	Note	Note	Note
(bales)	48,000 <u>1/</u>	Note	Note	Note
7. Number of states writing crop insurance	18	19	19	19
8. Number of counties writing crop insurance	919	933	939	1,000
9. Number of states for which yield and rate data es- tablished	19	19	19	19
10. Number of counties for which yield and rate data established	997	997	997	1,000

Note: Not practical to forecast crop results for this statement.

1/ Amount actually approved as of December 31, 1942.

(e) ADMINISTRATIVE EXPENSES, AGRICULTURAL ADJUSTMENT AGENCY

The Budget schedule reflects obligations against the appropriation established pursuant to Sec. 392(a) of the Agricultural Adjustment Act of 1938, as amended, and covers all administrative expenses of the Agricultural Adjustment Agency in carrying out, or cooperating in carrying out, the provisions of the several Acts in connection with which its personnel and facilities are utilized.

The amounts transferred into the appropriation account are within the limitations established for administrative expenses under the several appropriations from which such transfers are made.

That part of Sec. 392(a) authorizing the establishment of the appropriation account is quoted below:

"The Secretary of the Treasury is authorized and directed upon the request of the Secretary to establish one or more separate appropriation accounts into which there shall be transferred from the respective funds available for the purposes of the several Acts, in connection with which personnel or other facilities of the Agricultural Adjustment Administration are utilized, proportionate amounts estimated by the Secretary to be required by the Agricultural Adjustment Administration for administrative expenses in carrying out or cooperating in carrying out any of the provisions of the respective Acts."

Personnel and facilities of the Agricultural Adjustment Agency (formerly Agricultural Adjustment Administration) are utilized in carrying out the provisions of the Soil Conservation and Domestic Allotment Act, as amended, the Agricultural Adjustment Act of 1938, as amended, and the Sugar Act of 1937, and in cooperating in carrying out the provisions of the Federal Crop Insurance Act, and the appropriation covered by this schedule has been established by transfers from appropriations provided for carrying out the provisions thereof or arising from activities incident thereto.

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(f) SOIL CONSERVATION SERVICE

(f-1) GENERAL ADMINISTRATIVE EXPENSES

Appropriation Act, 1943	\$501,315
Budget estimate, 1944	<u>501,315</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated)	1944 :(estimated)
General administrative and business ex- pense	\$485,714	\$501,315	\$501,315
Unobligated balance	30,195	--	--
Total estimate or appropriation	515,909	501,315	501,315

1/ Includes \$5,575 transferred from "Soil and moisture conservation and land-use operations, demonstrations and information", for within-grade promotions under Public Law 200, 77th Congress.

WORK UNDER THIS APPROPRIATION

The work under this appropriation includes the furnishing of administrative direction to the program of the Soil Conservation Service. It provides for the establishment and maintenance of administrative policies, procedures, practices and controls to provide efficient, economical, and expeditious administration throughout the Service, and enables non-administrative branches to give full emphasis and undivided effort to the execution of the technical phases of the program. This appropriation provides for the Office of the Chief and in Washington three administrative divisions, Administrative Services, Budget and Finance, and Personnel Management which are responsible for the work outlined above.

Efforts are being made to continue to furnish the needed quality of administration to all phases of the Soil Conservation Service program. A concentrated effort is being made to offset the tremendous turnover in personnel due to the emergency by careful supervision and training. It is hoped this emphasis on training will make it possible to avoid the natural tendency toward lowered efficiency and increased cost of operation ordinarily caused by a large loss of trained personnel.

(f-2) SOIL AND MOISTURE CONSERVATION AND
LAND-USE INVESTIGATIONS

Appropriation Act, 1943 \$1,339,429
Budget estimate, 1944 1,339,429

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):
1. Investigations of the principles involved in soil and moisture conservation, and methods for their practical application on the farm	\$593,687:	\$571,776:	\$571,776
2. Watershed investigations of the effect of land-use practices on runoff as related to the methods of control of erosion and floods	412,977:	363,265:	363,265
3. Investigations of sedimentation resulting from erosion	91,980:	82,347:	82,347
4. Investigations of geographic and climatic factors related to erosion	68,911:	52,720:	52,720
5. Investigations of the economics of soil and water conservation	84,465:	77,376:	77,376
6. Investigations of erosion-resisting plants of economic value	92,461:	70,048:	70,048
7. Farm-irrigation investigations	86,462:	86,475:	86,475
8. Farm-drainage investigations	35,624:	35,422:	35,422
Unobligated balance	49,156:	- -:	- -
	<u>17:</u>		
Total estimate or appropriation	1,515,723:	1,339,429:	1,339,429

1/ Includes \$15,723 transferred from "Soil and moisture conservation and land-use operations, demonstrations and information" for within-grade promotions under Public Law 200, 77th Congress.

WORK UNDER THIS APPROPRIATION

General: The pressing need for maximum production of human food, feed for animals, fibers and oils and the necessity of attaining this production without seriously and permanently crippling the basic production resource, the soil, by undue erosion increases the demand for practical technical information obtained by research. The research workers of the Service are called upon not only for information but they are in ever-increasing demand to assist in the development of practical application in new locations. Farmers do not change their practices on the basis of recommendation alone. The practices must be modified and adjusted to fit into their particular conditions. Frequently field trials and tests must be made before a new practice will be accepted. This type of applied research, together with direct assistance in planning conservation, is in increasing demand throughout the Nation.

Formerly research findings in agriculture were put into effect by a slow educational process. Often a decade elapsed between discovery and application. With the advent of the action agency the facility for immediate application is provided and the research group of the action agency is designed to be the spearhead of this application by direct support of field operations of the Service. No research is undertaken except on problems the solution of which is considered by farmers or field technicians to be necessary for the program of conservation. The research work on the problem is usually conducted in three steps; first, the laboratory or plot work for basic information; second, the Experiment Station field scale trials of practices, and, third, the adjustment and modification of these practices for application on intensive areas often including development or modification of farm equipment or methods.

Objective: To develop efficient and practical methods of soil and water conservation as a basis for the conservation program in conservation districts and agencies of the Department concerned with the sustained production of food, fiber and oil.

The Problem and its Significance: At the beginning of the national program of soil and moisture conservation and proper land use, the Service was without adequate information and proven methods for practical and general application to the Nation's land resources. Research into the character, cause, extent, history and effect of soil erosion and water depletion and methods for soil and water conservation was undertaken to supply a sound base for the action program. The introduction of conservation features into the production programs of other agencies of the Department of Agriculture, particularly the Agricultural Adjustment Agency, and of the states, has been dependent upon the backlog of information gathered by the research work under this appropriation. There have been so many demands for assistance in this connection that there has been a material change in the program from basic fundamental studies to investigational work needed for the immediate application of conservation over wide areas. A large part of this work deals with the development of means of application of conservation principles in connection with an increase of row-crop production in soybeans, peanuts, potatoes, and special crops grown for oil and to meet the National needs for commodities normally imported to this country. In addition, much information developed in connection with the regular research program has been found to be of vital importance to the military and naval authorities. At their request and with their cooperation several lines of research have been intensified and extended in order to provide them with necessary information. Research, pointing out proper land use, has been and will continue to be of basic importance in the National economy. The work performed under this appropriation is the only research work performed by the Federal Government that is directly aimed at erosion control on farm lands. All action programs which consider conservation of farm lands are dependent upon the methods developed under this appropriation.

General Plan: The program of research is cooperative with state experiment stations and other agricultural agencies of the Department and states. The state agencies, by agreement with the Secretary, cooperate with the Soil

Conservation Service in the conduct of the work, and as far as possible furnish land, laboratories, office facilities, and technical assistance. As soon as the trend of results from a study can be perceived, measures promising to control runoff and erosion are developed and tested and put into application by operations technicians. Field tests and evaluations of practices are particularly important in developing and putting into immediate application sound programs in the conservation districts.

The current program of research in conservation is based on an appropriation that represents a reduction of \$160,571 from the amount available for the fiscal year 1942. This reduction was met by the elimination of all projects which could be suspended for the duration; the reduction to a maintenance basis of those projects which represented considerable investment but which could not be temporarily discontinued without material loss of investment made by the Government in them; and the reduction of all continuing work to a minimum operating basis.

Investigations of the principles involved in soil and moisture conservation and methods for their practical application on the farm:

General: The work under this project is being conducted from 50 centers located in 35 states and Puerto Rico. Causes and effects of soil erosion and moisture depletion are studied in the field and laboratory, and practical and economical methods for decreasing the losses of soil fertility elements by erosion and increasing the quantities of soil moisture available for plant growth are developed, tested, modified and proven under actual farming conditions. All of the research now being conducted under this project serves to furnish the basic information needed to make possible immediate application of conservation measures to the increased agricultural production requirements of the nation's farm lands.

Typical of the studies now under investigation are: (a) The effectiveness of different types and sizes of terraces in conserving soil and water, (b) the effectiveness of contour farming as compared with up-and-down hill farming, (c) the effect of using vegetation in contour strips, in balks, and in extensive covers for protecting the soil surface and improving sub-surface conditions, (d) the effectiveness of crop residues and mulches in conserving soil moisture and preventing soil loss by erosion, (e) the efficiency and practicability of different cropping systems in soil conserving plans for lands classified on the basis of susceptibility to erosion, (f) the maximum intensity of land use possible on sloping lands through use of supporting conservation practices, (g) studies of machinery and other cultural problems arising from the use of terraces, mulches, crop residues, or other conservation practices, (h) the stabilization and return to use of areas exposed to and damaged by wind or water erosion, (i) the effectiveness of crop residues in conserving the critical moisture supply of semiarid and arid regions, (j) application studies of research findings for the control of ground water deficiencies in war industry areas, and to the control of surface water on military areas such as landing strips, large airports and cantonments, (k) application of research findings in the establishment and growth of vegetation on problem areas to concealing and camouflaging military installations such as searchlight stations, and gun placements.

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Examples of Progress and Current Program: Field trials of the effectiveness of contour tillage, with and without the use of surface mulches and water-controlling structures such as terraces, are being conducted in the Corn Belt States with soybeans and in the Southeast with peanuts. These studies are cooperative with Technical Operations of this Service and cover a variety of conditions under which these emergency oil-yielding crops are grown and where damage from erosion is serious.

Soil physical and biological changes accompanying the growing of soybeans are being investigated in order to devise a system of culture which will reduce materially the erosion hazard of this crop.

Results of the past year indicate rather clearly that organic matter when left on the surface of the soil is more efficient in promoting soil aggregation and hence water infiltration and conservation than when mixed with the plow layer or turned completely under.

In a middle west area, where the manufacture of alcohol calls for large quantities of ground water for cooling purposes, investigations of the area have shown that the character of land use affects the penetration of rain by more than 600%. Data of the Service are also being used in the solution of problems of ground water deficiency for other areas. Even moderate changes in land use undoubtedly can be expected to contribute markedly to the storage of underground water.

Investigations of depths and rates of flow of rain water on grass and other surfaces are providing the first specific data upon which the design of highly specialized control measures for landing strips may be based. Flow over asphalt and concrete pavements is being considered in these studies in cooperation with the Army and Bureau of Public Roads. These investigations are developing several entirely new concepts as to the manner of flow of surface water in thin sheets and the controlling factors which primarily govern the depth, type and rate of flow, a primary consideration in design of landing strips as well as of erosion control measures.

Watershed investigations of the effect of land use practices on runoff as related to the methods of control of erosion and floods:

General: The work being carried on by this project involves studies of the effects of land use practices on the amount of runoff and erosion from watersheds. Practically all soil conservation practices on the farm are dependent upon hydrologic research which deals with water from the time it reaches the ground in the form of precipitation until it reaches main streams and major tributaries. It is important to see that soil conservation practices are such that crops are properly supplied with moisture which will carry them through possible drought periods; that the maximum amount of rainfall be withheld in the soil to prevent damaging floods; and that excess moisture that cannot be stored in the soil be conducted from the field without damaging soil erosion.

Examples of Progress and Current Program: These investigations are divided into two parts, the nature and progress of which are described below:

1. Determination of rates and amounts of runoff from watersheds located in the important agricultural areas of the United States for use in the economic design of erosion and flood control measures and of the hydraulic structures used in conservation operations and flood control.

These studies are necessary for dependable estimates of the magnitude of the runoff which must be handled by the channels, spillways, check dams, culverts, and other hydraulic works used in soil and water conservation operations. A lack of dependable information on runoff often results in the failure of such works. Perhaps even more frequently insufficient information leads to the use of unnecessarily high factors of safety in the design of these structures and thus to unjustifiably high costs. Another important use of the runoff data obtained is in the design of stock ponds and similar water facilities. Runoff measurements are being made on about 100 typical small watersheds located in 27 different hydrologic problem-areas upon the Demonstration Projects of the Soil Conservation Service.

Information on the influence of land use practices on the runoff and erosion from complete natural watersheds is needed in the planning of watershed improvement programs directed toward the conservation of the soil, the reduction of floods, better use of water resources, and the attainment of a balanced agricultural economy. The principal investigations pertaining to this work are concentrated on the experimental watersheds near Coshocton, Ohio; Waco, Texas; Hastings, Nebraska; and Mexican Springs, New Mexico. Additional studies of the land use effects are also being carried on in cooperation with the state experiment stations in Maryland, Virginia, Arkansas, Indiana, Idaho, Oklahoma, Texas, New York, Missouri, Wisconsin, Iowa, and Washington. These studies, besides furnishing necessary information in connection with the Soil Conservation Service field program and flood control activities, have furnished much information needed for the war program. Ground-water and runoff data are being made available to power companies engaged in supplying hydro-electric power to vital industries. Data on frost, soil temperature and moisture in the northern states are being studied by highway transportation officials for the purpose of determining highway safe loads and routing of commercial and military truck traffic. Similar data have been requested and are being assembled for use by the War Department in making studies of ground conditions with reference to the supporting power of the soil for airplanes, tanks, and large guns.

The hydrologic data being collected will provide a basis for planning adequate and improved post-war activities in soil and water conservation and agricultural flood control. Advanced data on flood flows and runoff from the experimental watersheds were furnished the Agriculture Department's flood control office for its use in the preparation of reports on flood control. The publication of three hydrologic bulletins in the Department series has established a permanent record of basic hydrologic data useful to the various action programs of the Department of Agriculture; to the War Department in dealing with runoff problems in Army camps, airports, and the operation of power and navigation projects; to the Public Roads Administration and State Highway Departments for use in designing culverts, weirs, check dams, and diversion ditches; and to contractors and consulting engineers, railroads, utilities, and others in their water-supply and water-control problems.

2. Investigations of the hydraulics of soil and water conservation and the development of economical hydraulic systems for removing and disposing of the runoff from farm lands.

These investigations are being conducted at Auburn, Alabama; Minneapolis, Minnesota; Logan, Utah; Corvallis, Oregon; Prosser, Washington; Stillwater, Oklahoma; McCredie, Missouri; and Pasadena, California. The major objective of these investigations is to increase the dependability and at the same time to decrease the cost of the channels, check dams, spillways, and other hydraulic works required in soil and water conservation operations.

The data obtained are distributed immediately to the field technicians of the Soil Conservation Service for use on Demonstration Projects, Soil Conservation Districts, and the lands of individual farmers all over the country. One of the chief results of these investigations has been the development of an economical and simple outlet structure suitable for use with culverts and flumes which practically eliminates erosion in the stream channel below the structure that quite commonly results in the undermining and destruction of the structures. These investigations assume added significance at the present time since farmers must conserve both material and labor, yet at the same time provide structures which have added capacity to properly control erosion. Results of these hydraulic tests have been furnished to the Public Roads Administration for use in the design of road culverts and ditches and for the prevention of erosion in roadside ditches.

Investigation of sedimentation resulting from erosion:

General: The purpose of this project is to develop methods for reducing sedimentation damages, estimated to amount to \$100,000,000 annually, in reservoirs, navigable stream channels, harbors, canals, and on valley farm lands. These damages are caused by the deposition of soil eroded from farm and range lands.

The war has emphasized the critical need for conserving our storage reservoirs, which supply water to 20 percent of the Nation's population, to 50 percent of its war industry, and to power plants that supply 33 percent of its electric power. Nearly one-fifth of the dams built in this country have already been rendered useless, or nearly so, by silting. More than one-fifth of the 10,000 dams and reservoirs still in use will be abandoned in less than 50 years for the same reason. For decades, our most common method of overcoming the effect of silting has been to build new, bigger, and more costly reservoirs. The war has already stopped most new dam construction. It is now more important than ever that we take all possible steps to conserve the storage of our existing reservoirs. This can be done by keeping silt out of the streams and getting it out of the reservoirs. Studies are being made to develop methods for doing this efficiently without drain on labor and critical materials.

Examples of Progress and Current Programs: Research under this project has shown that at High Point, North Carolina, the rate of silting in the city's water-supply reservoir was reduced 25 percent by conservation measures

applied to 33 percent of the land in its watershed. Sedimentation studies there and elsewhere have shown that silting in most reservoirs could be reduced 50 percent by development of control on the watershed.

Field and laboratory research is now under way, also, on the most practical methods of removing sediment from reservoirs. As a result of these studies, the Washington Suburban Sanitary Commission is now installing special outlets in its new \$1,500,000 Brighton Dam on the Patuxent River, 13 miles north of Washington, which will remove an estimated 75 percent of the sediment carried by density currents through the lake to the vicinity of the dam.

Field investigations this year have been concentrated on certain acute silting problems that may affect war economy. For example, a special study of the silting and water supply problems of Corpus Christi, Texas, where the reservoir has lost 20 percent of its capacity in 8 years, was made at the request of the Navy Department, which allocated funds to cover part of the cost of the investigation. A large amount of reservoir data has been made available also to the Coast and Geodetic Survey for use in preparing new aeronautical charts for military use. Cooperation is underway with the Intelligence Branch, Corps of Engineers, U.S. Army, on a special military project.

Recent studies of stream and valley sedimentation have shown that, in southeastern Minnesota and southwestern Wisconsin, Iowa, northern Illinois, South Carolina, Mississippi, and other parts of the South, hundreds of tracts of land a few acres in size, bordering smaller streams, could be brought into cultivation, or crop production could be increased, by relatively simple and inexpensive practices to control flooding and overwash of sediment. These practices consist of local channel cleaning and control of sedimentation by simple earth dikes, wooden baffles, or vegetation, which require no critical materials and usually only a few days' work per acre. The effects of experimental channel work are now under study at the Sediment Load Station, Greenville, S. C. The largest aggregate area of unused land of high potential productivity, without irrigation, is along smaller stream valleys of the Eastern and Middle Western States. Research that will contribute to controlling flood and sediment problems on this land will be most important to the food production program during the next 5 years.

A considerable amount of work has been done at the Cooperative Laboratory of the Service and the California Institute of Technology, Pasadena, on structures designed for water and sediment control. Drop inlet structures designed there are now being built on farms in California and are being adapted to conditions in Texas and other states. Baffle structures for pipe outlets needed in farm water-disposal plans to prevent localized channel erosion and sedimentation are currently being designed.

Investigations of the geographic and climatic factors related to

erosion:

General: The work under this project is designed to determine and evaluate the effects of climate and of the various climatic and physiographic factors upon soil and water conservation.

The objectives are: (1) evaluation of effect of local climate on soil and water conservation, (2) analysis of climatic risks in critical areas, (3) determination of physiographic processes resulting in soil erosion.

Examples of Progress and Current Programs: Climatic studies recently completed include a statistical analysis of the data from 125 well-distributed stations in the United States and the results have been presented in graphical form so that the probability of drought or of precipitation of various specified amounts can be determined for any time interval or any portion of the country. From this analysis it is possible to determine the time of year that is best for undertaking erosion control operations such as terracing or establishing a grass cover. The method of analyzing drought as developed in this study has important military value and, in cooperation with the Army Air Corps, the work is being extended to include studies to determine the best time of year to undertake special types of military operations.

The results of periodic and detailed surveys made in eastern Ohio, Pennsylvania, and West Virginia on slips and other forms of mass-movement of soils are being prepared for publication. This information will serve as a basis for determining the hazards to agricultural lands and to highway, industrial, and military construction resulting from these forms of soil movement.

Investigations of the economics of soil and water conservation:

General: The purpose of research under this project is to determine the effects of conservation practices and uses of land on the organization, operation, and income of the individual farms, and on the economic and social welfare of the public. An important phase of this work in the present emergency is the determination of the extent to which the soil resources can be safely used to meet the greatly increased needs for production without such great disruption of agricultural economy as followed the indiscriminate exploitation of lands during World War I.

The research program of this project consists of three objectives: (1) to determine the economic effects of conservation practices and associated changes in land use from the standpoint of the individual farm, (2) to evaluate soil and water conservation programs in terms of the public economic and social welfare, (3) to develop economic information pertaining to selected problem areas as a better basis for formulation and improvement of soil conservation programs.

In attaining these objectives many factors must be considered. Among these factors are some that have special significance in the present emergency such as: (1) labor supply and seasonal utilization; (2) quantity, kind and utilization of available power; (3) time and extent of use of specific kinds of seeding, harvesting and other machinery and equipment; (4) uses of

land in relation to land use capabilities especially in regard to growing new crops or increasing the production of special oil or fibre crops; (5) livestock feeding, grazing, and management practices; and (6) other cost factors such as fertilizer, seed, fences, and buildings.

Examples of Progress and Current Program: Analysis under this appropriation in connection with studies of erosion control economics determine the production possibility of specific areas in terms of special crops and livestock products as a basis for planning production goals. This work is being carried on in the field with county war boards. Reports are prepared showing the best recommended land use and possible safe production for the state concerned. Specific crops considered have included soybeans and peanuts for fats and oil, as well as the production of larger feed crops to increase production of meat, eggs, milk, poultry, and concentrated human foodstuffs.

Investigations of Erosion-Resisting Plants of Economic Value:

General: The purpose of this work is the furtherance of practical and profitable control of soil erosion on farm lands that are too steep or erodible for ordinary cultivation. Erosion-resisting crops and plants, needed for adequate farm subsistence and also useful for securing increased farm income, are developed on sloping lands under methods which conserve soil and fertility. War needs have created a demand for many specialty plant-products, the production of which can be made to control erosion while benefiting the farmer and the Nation.

Examples of Progress and Current Program: The Navy Department is interested in milkweed floss for life preservers and air vests to replace the kapok that formerly was imported from the East Indies. The normal imports of kapok were approximately 20 million pounds annually, prior to the invasion of the East Indies. A survey of milkweed growth and yield was made in Michigan, and results reported to the Navy as a basis for the initial commercial development. A joint study in cooperation with other Federal and state units was made of milkweed as a farm crop possibility in Michigan. The results indicate that sufficient wild milkweed is available in the northern portion of the lower peninsula of Michigan to provide about 3 million pounds of floss, providing labor and facilities are available for collecting and processing. Sufficient pods were collected this year to yield approximately 50,000 pounds of floss which will be turned over to the Navy for use.

Surveys of domestic sumac-leaf supplies for tannin production were made in Virginia, Maryland, New Jersey, and Iowa, and joint studies with the several interested Federal and state agencies have been made to learn how to produce a sumac-leaf product comparable to the imported Sicilian sumac leaf, now unavailable to tanners. Substantial results in this work have been added to those obtained previously and are being tested commercially. Surveys and studies have been made of other essential plant materials of a specialty nature, whose production is urgently needed and can be made to serve erosion control purposes if grown as farm crops. Field work was carried out in the South and Southwest for possible substitutes of imported legumes and other seeds which have furnished products needed for sizing cloth and paper, and for other industrial uses. Cork oak studies in the United States show that this tree grows well and produces a good quantity of cork both in California and in the southeastern states. Test plantings made at Hillsboro and Americus, Georgia; Thorsby, Alabama; and Brooksville, Florida, show that this useful commercial tree survives well and makes good growth at those locations.

Cultural and developmental tests of many species and selections of promising erosion control crop plants of the "hillculture" type were begun in previous years. These are necessarily long-term cooperative tests of superior selections for improved farm income and subsistence, such as: pasture-improving trees (black locust, black walnut, honey locust, etc.); nut crops for supplemental farm income (Asiatic chestnut, hazel, walnut, hickory, etc.); hardy fruits and berries for farm use (beach plum, dry-land blueberry, George Washington cherry, select elderberry, etc.); plants yielding insecticides harmless to man and animals (devil's shoe-string and velvet tree); and others. Tests of this character are being maintained on a minimum basis in order that the major effort may be given to meeting needs arising from the war.

Farm Irrigation Investigations:

General: Throughout the western states profitable agriculture is largely dependent upon the practice of irrigation. Water supplies are limited and it is important that irrigation practices be developed that make the best possible use of existing water supplies, and that investigations be made to locate other possible sources of water to supplement those already in use. In many cases additional water is stored below the surface of the ground in layers of saturated sand and gravel and may be recovered by pumping from wells. In some instances surface runoff water can be diverted and spread over previous areas of soil where it seeps below the surface and becomes a part of the underground supply. Investigations are necessary to locate sites where such practice is feasible and to develop economical methods of spreading.

Throughout the irrigated region much of the irrigation water is derived from melting snow on the mountain range. If the amount of snowfall during the winter and spring is small, the supply of water available for irrigation during the cropping season will be limited. It is therefore, important that the irrigation farmer have information relative to the snow cover in the mountain area prior to the planting of his crops in order that he may adapt his cropping program to the water supply that will be available for irrigation.

Examples of Progress and Current Program: Studies now under way include (a) water requirements for irrigation, (b) pumping requirements for irrigation, (c) drainage of irrigated land, (d) snow surveys and irrigation water supply forecasts, (e) design and invention of irrigation apparatus, (f) studies of fundamental hydraulics necessary for irrigation enterprises, and (g) the organization of irrigation institutions and state water laws.

The study of the laws and problems affecting water rights in the West, undertaken at the request of the Office of the Solicitor of the Department of Agriculture, has been completed and a final report published that will serve as a guide in developing the Department's policy in connection with irrigation. The analysis of the data and the preparation of the final report on the consumptive use of water and the consumptive requirements in the Pecos River watershed in New Mexico and Texas, carried on as a joint investigation with the National Resources Planning Board, has been completed. The money released by the completion of these pieces of work is being used in connection with emergency rubber production program and other urgently needed investigations relating to the more effective use of irrigation water supplies.

In connection with the emergency rubber production project, this Service is cooperating with the Forest Service and has been assigned the responsibility of developing the irrigation phases of the project. There is practically nothing known of the irrigation requirements for guayule. In the past it has been assumed that it was a desert plant and consequently would thrive on the precipitation occurring in its growing area. However, preliminary investigations indicate that artificial moistening of the root zone not only results in a larger plant but reduces the time required to reach mature growth by about 50 percent. Investigations to determine the water requirements are under way and engineers of the Service are serving as consultants in developing proper methods of irrigation in special areas, based on the research findings.

Investigations relating to the development of effective and economical methods of reducing seepage losses in irrigation canals have been expanded in connection with the war production program. In many instances it has been found that from one-fourth to as much as one-half of the water supplied to unlined irrigation canals is lost through seepage and never reaches the cultivated fields. This not only materially reduces the crop acreage that can be irrigated with existing water supplies but also results in the waterlogging of extensive areas that must be drained before they can be profitably cultivated. Experiments with various methods of ditch lining are being carried on at a number of locations to determine practical and economical methods of reducing seepage losses.

Investigations are being carried on in Utah and other western states to determine the efficiency of application of irrigation water used upon a variety of crops in important agricultural sections. One of the most important factors in obtaining efficient use of irrigation water is to avoid the application of excessive amounts in single irrigations with subsequent loss by percolation into the lower ground level. It has been found, for instance, that a single application of approximately 1 acre-inch shows an efficiency of retention of about 64 percent, while larger amounts applied at one time showed decreasing efficiency, with only 21 percent efficiency for a 4-inch irrigation.

Snow surveys are being extended in connection with the food and fiber production program in irrigated regions. Such surveys furnish the information upon which forecasts of the forthcoming season's water supply available for irrigation must be based. They furnish irrigation farmers, in advance of planting time, with reliable information as to whether an abundant or scant water supply will be available, and whether there will be a flashy or prolonged runoff resulting from the melting of the snow mantle. Thus the farmers are able to increase or decrease the acreage planted in accordance with the water supply that will be available during the growing season, and to plant early or late maturing crops to fit the early or late runoff conditions indicated by the forecasts. The water supply forecasts are also of value to municipalities, power companies and industrial concerns in planning their operations.

Farm-Drainage Investigations:

General: Work under this project is aimed at the development of better methods of agricultural drainage. The program includes investigating and reporting upon the best methods and materials used in the drainage of agricultural lands; the improvement of equipment for constructing and maintaining drainage works; and the development of more efficient methods of organizing, administering, and maintaining drainage enterprises. Basic hydraulic information is being developed which, when applied to the design of drainage ditches, tile drains, and pumping plants, will result in greater efficiency and reduced costs.

Examples of Progress and Current Program: Typical of the investigations relating to farm drainage are those under way in southern Louisiana where the maintenance of drainage improvements requires a large amount of hand labor and makes up a material part of the cost of producing sugar cane. Shortage of labor in the area is becoming critical and to reduce the requirement for labor, ditch maintenance equipment is being developed to replace hand labor. Experimental mole drains have also been installed to determine the feasibility of using such drains to replace open ditches, thus further reducing maintenance costs. The possibility of using mole drains in other sections of the country where drainage is limiting crop production is being investigated. Such drains can be installed rapidly at about the cost of one good plowing of the land, and where conditions are suitable, offer a rapid, cheap, and effective method of improving drainage conditions.

A progress report of the water control investigations being conducted on the peat lands of southern Florida has been completed for publication as a bulletin by the Florida Agricultural Experiment Station. This bulletin will make available to all agencies interested in the conservation of the area the results so far secured on the project.

Technical assistance is being furnished the War Relocation Authority in drainage improvements on two projects in Southeast Arkansas on which Japanese aliens have been located.

(f-3) SOIL AND MOISTURE CONSERVATION AND LAND-
USE OPERATIONS, DEMONSTRATIONS AND INFORMATION

Appropriation Act, 1943	\$20,510,812
Proposed transfers in the 1944 estimates to other appropriations (see Budget schedules for details) ..	-150,688
Total available, 1943	20,360,124
Budget estimate, 1944	20,130,000
Decrease (including decrease \$106,974 travel funds returned to surplus)	-230,124

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. General conservation surveys, soil and moisture conserva- tion operations on demonstra- tion projects, and cooperation with conservation districts, and Federal and State agen- cies (also cooperation with Civilian Conservation Corps during the fiscal year 1942):				
a. Cartographic and multilith- ing activities necessary to map reproduction for all Service activities and physical land surveys out- side of established work areas	\$1,387,401:	<u>1/</u> --:	<u>1/</u> --:	<u>1/</u> --
b. Soil and moisture conser- vation operations by means of demonstration projects in agricultural and erosion regions	1,112,812:	745,610:	622,460:	(1) -123,150
c. Soil and moisture conser- vation operations in co- operation with conservation districts established under state laws	14,739,615:	<u>2/</u> 17,528,357:	<u>3/</u> 17,528,357:	--
d. Technical cooperation with Federal and state agencies (also Civilian Conservation Corps during the fiscal year 1942)	1,382,015:	850,948:	850,948:	--
Total, project 1	18,621,843:	<u>2/</u> 19,124,915:	<u>3/4/</u> 19,001,765:	-123,150
2. Operation of conservation nurseries for furnishing of plants for use in soil and moisture conservation opera- tions	1,194,911:	1,128,235:	<u>4/</u> 1,128,235:	--
Covered into Treasury in accord- ance with Public Law 674	--:	106,974:	--:	-106,974
Unobligated balance	3,492,821:	--:	--:	--
Total estimate, 1944 and com- parable amounts, 1943 and 1942	<u>5/</u> 23,309,575:	20,360,124:	20,130,000:	-230,124

- 1/ No funds are budgeted separately in 1943 or 1944 for this work project. It will be noted from the title of the project that it was originally designed to cover two types of work, namely, (a) cartographic and multilithing activities and (b) physical surveys outside established work areas. The cartographic and multilithing activities are definitely related to cooperation furnished to conservation districts and, hence, provision for this work is included in the estimates for the project covering district cooperation. No funds are included in the 1943 and 1944 Budgets for item (b) because all physical survey work now being undertaken is within established work areas, principally districts.
- 2/ Includes \$148,132 allotted to the Bureau of Plant Industry for Soil Survey Work in 1943 (ten months basis).
- 3/ Includes \$177,758 to be allotted to the Bureau of Plant Industry for Soil Survey Work in 1944.
- 4/ Adjustment of \$26 made between projects 1 and 2 after Budget was printed.
- 5/ Excludes \$5,575 transferred to "General administrative expenses", and \$15,723 transferred to "Soil and moisture conservation and land-use investigations" for within-grade promotions under Public Law 200, 77th Congress.

DECREASES

The decrease of \$230,124 in this item for 1944 consists of \$106,974 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$123,150 under "Soil and moisture conservation operations by means of demonstration projects in agricultural and erosion regions", as follows:

- (a) \$3,150 to be saved through curtailment of certain publications, such as house organs.
- (b) \$120,000 to be accomplished by further reducing the demonstrational work in the Southwest conducted on a large watershed basis and by other adjustments within the project.

WORK UNDER THIS APPROPRIATION

General: The work performed under this subappropriation has a greater National significance at this time than at any time during the existence of the Soil Conservation Service. The definite need for the best possible use on a sustained basis of every acre of our land is now an accepted reality. This need arises from the unprecedented demands for the production of food, fibers, and oils for the United Nations as a part of their all-out War effort. This demand cannot be met for an indefinite period of time unless farmers and ranchers of this country are assisted in applying conservation measures which not only increase their yields per acre but also maintain or increase the potential productivity of the soil for future use. All the work performed under this subappropriation is aimed at this objective.

Objective: To furnish the needed effective and widespread assistance to the farmers and ranchers, that they may direct their farming efforts toward:

- (1) maximum production to meet the war needs, with minimum use of vital war materials, equipment and labor, and minimum loss of soil resources;
- (2) preserving and restoring the soil resources by planting soil-conserving and moisture-holding crops and carrying out soil-building practices;
- (3) stabilizing farm economy and increasing farm income, through reduction in operating costs and crop losses;
- (4) protecting rivers, harbors, reservoirs, and power resources against frequency and ravages of floods by holding rainfall on the watersheds for use during the growing seasons and by proper drainage, thereby averting or diminishing loss due to droughts.

The Problem and its Significance: The problem is two-fold, namely, (a) need for production and (b) maximum utilization without exhaustion of the land resources.

Farmers have been called upon to produce unprecedented quantities of agricultural commodities, but with the use of limited fertilizer, materials, equipment and manpower. The Nation has the cropland capable of producing that which is needed, if it is used according to its capabilities and in a manner conducive to maximum production. Generally, however, land-use has not been guided by the capacity of the land.

Application of conservation measures is essential to per-acre sustained and increased yields on the farms and ranches. This increase in yield, in part, enables the farmers to get the tremendous increase in production that is needed, and by producing more per acre, the need for labor and equipment is decreased.

Production through conservation now will help check the current rate of soil deterioration and help prevent the recurrence of the calamities during and following the first World War directly resulting from misuse of the land, when the farmers increased production to meet wartime demands and to take advantage of the high prices, and later to overcome the disadvantages of lower prices.

For example, expansion of wheat acreage was emphasized during the first World War with the result that certain lands in the western part of the Corn belt and in the Wheat belt were subjected to erosion to the point that the land was essentially ruined for crop production for several years, which resulted in the Dust Bowl and the migration of hundreds of farm families.

There is every danger that a similar mistake will be made in the present war. For instance, expansion of the acreage of soybeans is being emphasized. The growing of soybeans leaves the land in condition to erode much faster than

the growing of wheat and unless due precaution is taken, we shall emerge from this war with another great problem to check the erosion and rehabilitate the families dependent upon the land. The possibilities for such rehabilitation are not inexhaustible.

General Plan: Program - The work under this appropriation has been organized for direct application through (a) conservation districts organized under state laws, and demonstration projects and (b) cooperation with various Federal and state agencies for the purpose of integrating soil and moisture conservation practices with their respective agricultural and land programs. In addition, nurseries are operated to supply seed and planting stock varieties for use in soil and moisture conservation operations.

Operations - Generally, a conservation survey is first made to determine the needs and capability of the land of individual farms. Next, farm plans are worked out directly with farmers in groups and later individually. These plans are developed upon the basis of information available from the conservation surveys and information concerning the individual farm operations. The farm plan charts for a specified period of time, usually from three to five years, the type of use, cultivation, and plantings that should be made to accomplish erosion and moisture control and proper land use. For example, determination as to the need and proper location for installation of conservation practices, such as strip-cropping, pasture renovation or terraces, is made upon the basis of type of soil, degree and extent of erosion and the slope of different parts of the farms, all covered in the conservation survey. A further consideration as to the need for different crops and forage to meet feed requirements for present or contemplated livestock is necessary. These two broad types of information exemplify the considerations, i. e., physical and managerial, which the farm planner and the farmer use along with technical knowledge, in developing the farm plan.

After the development of the farm plan, the farmer is furnished assistance in the execution of that plan. Such equipment and planting stock as is available through this appropriation or that may be supplied by the district, in the case of work within conservation districts, is also made available for use in the application of the plan.

The basic program and objective of the work financed from this appropriation, namely the conservation of the soil resources and making land-use adjustments, remain unchanged. However, in order to make the greatest contribution to a progressive and permanent agricultural program including that essential to winning the war, there has been developed, in cooperation with other agencies, a widespread approach to be carried out during part of the year, for bringing about application of production conservation practices on as many farms and ranches as possible:

(1) The "Widespread Application" program: This program is conducted in all agricultural counties and conservation districts in collaboration with State and County War Boards and in cooperation with the Extension Service, Agricultural Adjustment Agency, Farm Security Administration, Farm Credit Administration, State Vocational Agricultural Departments, State Conservation Commissions, and others cooperating in different areas. It is based on the application of those practices which the farmer can install with little or no additional use of labor and equipment and with a minimum of technical guidance and which at the same time will contribute materially to the immediate increased productivity of the land, to soil and water conservation, and the welfare of the farmer and community. These practices consist of such measures as (a) contour tillage, (b) seeding waterways and eroded areas damaging other lands, (c) wind stripping, (d) establishment of cover crops, (e) establishment of new pastures and improvement of old ones, (f) woodland protection, and (g) utilizing crop residues for conservation purposes rather than burying them. For range land such practices might include (a) bringing herds in line with long-time grazing capacities of the range, (b) culling herds, (c) deferred and rotation grazing, (d) artificial reseeding, and (e) growing and maintaining feed reserves.

Assistance is furnished in (a) developing a list of such practices by local areas, (b) preparing simple specifications for practice application and maintenance, (c) explaining the program to district supervisors and County USDA War Boards and (d) developing procedures for carrying the program to the farmer.

(2) The "Critical Area" program: Farmers and ranchers in critical production areas, which include large acreage of clean-tilled, soil-depleting crops, are assisted under this program in attaining agricultural production goals in a way which will result in a minimum loss of soil resource. The State Extension Service, the State Experiment Stations, the Agricultural Adjustment Agency, the Soil Conservation Service, and other agricultural agencies are working cooperatively in (a) determining areas where wartime production gives rise to critical soil problems and farmers need additional assistance; (b) formulating and agreeing upon uniform recommendations for each such area; (c) determining assistance needed in such areas during critical seasons, in addition to that currently available therein; (d) considering what assistance the Extension Service, the State Experiment Stations, the Agricultural Adjustment Agency and the Soil Conservation Service can make available for work in each such area; and (e) detailing or assigning personnel and making available other assistance agreed upon for work in the respective critical areas.

(3) Assisting the Armed Forces on military areas. There is made available whatever help the armed services may require in erosion control operations, drainage, flood control, protection of water supplies against sedimentation, camouflage, and similar protective and facilitating activities on and near camp sites, cantonments, airfields, and other military areas.

(4) Furnishing major assistance in developing basic information for production goals, under leadership of the Bureau of Agricultural Economics.

Surveys will be continued to provide basic information for the development of farm plans and needed land-use adjustments. A limited number of demonstration projects will be continued as major proving grounds. Work will be carried out largely within conservation districts, for they furnish a ready-made organization with which to work for the greatest immediate results. The facilitating programs of technical cooperation with Federal and state agencies and soil conservation nurseries will be carried on in 1944 at about the same rate as 1943.

General conservation surveys, soil and moisture conservation operations on demonstration projects, and cooperation with conservation districts, and Federal and state agencies:

(a) Cartographic and multilithing activities necessary to map reproduction for all service activities and physical land surveys outside the established work areas. (See statement immediately following "Project Statement".)

(b) Soil and moisture conservation operations by means of demonstration projects in agricultural and erosion regions: The demonstration projects provide for the development of conservation methods and practices and furnish proving grounds for their wide-spread application. In addition, practices applied on farms within demonstration areas are studied and adapted by owners and operators of nearby farms. This program has gradually changed from one of large acreage carried out at substantial Federal cost to one of small acreage and greatly reduced cost.

New projects will be opened from time to time as other projects are placed on a maintenance basis or as the maintenance phase of older projects is completed. These new projects will be limited to (a) the regions where economic distress due to misuse of the land is more advanced and (b) critical areas particularly affected by the requirements for increased production. The primary objective of these projects will be to demonstrate conservation measures to be applied where crops included in the National production goals and new to the areas are being introduced or where existing crops are being expanded to areas not usually used for cultivation.

(c) Soil and moisture conservation operations in cooperation with conservation districts established under state laws: Conservation districts are the medium through which more production, through conservation now and in the immediate future may be accomplished. Forty-two states have already enacted soil conservation district laws. The following is a tabulation showing the organization of districts during the fiscal year 1942 and anticipated districts during 1943 and 1944:

1942 Fiscal Year (Actual)	No. of districts organized *	No. of farms included	No. of acres included
July 1, 1941	548	1,507,000	332,000,000
June 30, 1942	771	2,121,000	452,000,000
Annual basis	659	1,814,000	392,000,000
<u>1943 Fiscal Year (estimated)</u>			
July 1, 1942	771	2,121,000	452,000,000
June 30, 1943	1,011	2,780,000	560,000,000
Annual basis	891	2,450,000	506,000,000
<u>1944 Fiscal Year (estimated)</u>			
July 1, 1943	1,011	2,780,000	560,000,000
June 30, 1944	1,192	3,099,000	660,000,000
Annual basis	1,101	2,940,000	610,000,000

*The number of districts is based upon certificates of organization being issued by the respective states. This is the time at which the Soil Conservation Service is requested either by the governing body or by farmers who are assisting in organizing this body to assist the districts in making reconnaissance surveys and developing work plans and programs before Memoranda of Understanding with the Department and supplemental agreements with the Soil Conservation Service are signed. After that time, of course, other assistance is furnished through the districts to farmers and ranchers.

Cooperation now being furnished the districts is already at a rate below the minimum that is estimated to be economical and satisfactorily effective. It is believed, however, that in view of the war, it will not be possible to increase or expand the intensity of the district program at this time because of the non-availability of men technically trained for this purpose. The plan for operation during 1944, therefore, anticipates, a partial change in type of assistance to be rendered through the "Widespread Application" program covered in detail under "General Plan", and to furnish despite the shortage of trained technicians at least some of the assistance which is most vitally needed now. This will deal particularly with aiding the farmers and ranchers in applying measures to accomplish production through conservation. Although this is only a part of the complete conservation plan which is necessary to establish and maintain control of erosion, it is that part which can make its greatest contribution to increasing production now, while at the same time permitting a minimum of soil wastage. Conservation districts will be assisted in so far as available resources permit. During crop seasons, this assistance will emphasize (a) use of land in accordance with its capabilities and (b) the "Widespread Application" programs, complex practices to be agreed to but not installed until the farmers have the labor, equipment and other items that are required.

(d) Technical cooperation with Federal and state agencies: The technical cooperation work is being considerably broadened in its field of application. The "Widespread Application" program described above, conducted in cooperation with the Extension Service, Agricultural Adjustment Agency, and other Federal and state agencies, makes possible the application of many conservation practices in every agricultural county of the country. This work is financed from funds budgeted under this project, except where the work undertaken falls within established areas - districts, projects, etc. No additional funds are budgeted in this item, however, for 1944, because it is believed that the technical staff assigned to districts and budgeted under that item, will direct this program, and so to the extent they work outside of the districts, it will be necessary to make financial adjustments within the various work projects under this appropriation.

The liquidation of the CCC program affected funds available under this project only to the extent of the number of camps that were still outside of conservation districts. On these camps, because of uncompleted agreements, it was, and is necessary to maintain technicians at least until the farm plans have been applied to the land, in order to capitalize on the work thus far accomplished. It is expected that this phase of the work will be substantially completed during 1943.

In other cooperative work, definite emphasis is being placed on those activities that will make the maximum contribution to the winning of the war. For example, technical assistance is being furnished the Army engineers in camouflage activities and in applying erosion control measures to military areas to protect the installations from soil erosion, thereby freeing men for more direct prosecution of the war, through decreasing the need for maintenance crews.

Operation of conservation nurseries for furnishing of plants for use in soil and moisture conservation operations. An important adjustment is now under way in the work under this project. This adjustment is related to the gradual decline in the demands for nursery stock (trees and shrubs) and the greatly increased demands for collection or production of seed (grass and legume) for erosion control plantings.

With the demand for beef and dairy products the farmers and ranchers are interested in improving their pastures and ranges. By supplying them with small quantities of seed of native species of grasses, and newly developed strains of grasses and legumes, they are immediately increasing the productivity of their hitherto waste lands and are conserving their soil at the same time.

These small quantities of seed are also providing the basis for increase leading into quantity production to supply not only the increased National needs but also the Lend-Lease requirements.

Seed requirements of the Service for erosion control plantings will be practically doubled for the fiscal year 1944. The requests to collect or produce for this purpose during 1944 exceed 2,000,000 pounds of seed, whereas in 1943 they amounted to only 1,000,000 pounds.

Herbaceous plant material production has been maintained at a fairly steady level. Kudzu requirements for erosion plantings in the south have been reduced because of lack of seed. Beachgrass and other grass stolons for sand dune stabilization have increased in quantity. This is primarily because much of this work is being conducted in areas adjacent to coastal defense structures in the northwestern and northeastern United States.

(f-4) EMERGENCY EROSION CONTROL, EVERGLADES REGION, FLORIDA

Appropriation Act, 1943	\$75,648
Budget estimate, 1944	<u>72,248</u>
Decrease (travel funds returned to surplus)	<u><u>-3,400</u></u>

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
Research and demonstration work :	:	:	:	:
in soil-conservation control :	:	:	:	:
measures, including research :	:	:	:	:
and demonstration work in fire :	:	:	:	:
control and irrigation con- :	:	:	:	:
struction work to eliminate :	:	:	:	:
fire hazards, in the Ever- :	:	:	:	:
glades region of Florida	\$67,846	\$72,248	\$72,248	- -
Covered into Treasury in accord- :	:	:	:	:
ance with Public Law 674	- -	3,400	- -	-3,400
Unobligated balance	<u>7,154</u>	- -	- -	- -
Total estimate or appropria- :	:	:	:	:
tion	75,000	75,648	72,248	-3,400

WORK UNDER THIS APPROPRIATION

Objective: The stabilization of the ground-water table in the Florida Everglades region by controlled drainage and water-holding dykes, levees, and other mechanical structures for the elimination of fire hazards and conservation of water and soil resources.

The Problem and its Significance: Uncontrolled drainage during the wet seasons causes excessive loss of water needed for maintaining a higher water table throughout the dry season. The resulting low water tables during dry seasons are conducive to extensive damage from fires and the even more serious soil deterioration brought about through organic action. In the absence of proper moisture distribution regulatory measures, full soil productivity is not realized, droughts occur and crop losses follow.

The Everglades area proper comprises approximately 2,700,000 acres of land of which over a million acres have been affected to some degree by fire. In many places during the last 20 years, the fire has burned through the whole depth of the accumulated peat which it has taken 2,000 to 3,000 years to build up. Serious soil subsidence has occurred over the entire 100,000 acres, approximately all cultivated land, around the southern shore of Lake Okeechobee. In extreme cases the subsidence has amounted to as much as 4 feet of approximately 12 feet of productive muck soil in the immediate area. Proper drainage and water-level control in the Everglades Region will conserve the productivity of these lands and open wide areas for profitable cultivation.

General Plan: Surveys for determining the extent of developed and potential agricultural land will be completed in 1943. Topographic and land-use capability surveys will be continued. Additional wells of 50 to 60 foot depth will be drilled in cooperation with the U. S. Geological Survey to determine the rock formation beneath the peat. Evaporation tanks will be installed in virgin saw grass land to secure evaporation data, and studies of runoff and seepage will be continued. Additional dykes and spillways will be constructed to provide a source of basic information for the development of water management practices and fire prevention.

Federal expenditures are matched by at least equal expenditures for the same purpose by the State or political subdivisions thereof, thereby doubling the effectiveness of Federal expenditures. During the fiscal year 1942, state and other offset expenditures exceeded Federal expenditures by approximately 18 percent.

Examples of Progress and Current Program: A number of delaying obstacles slowed progress in the beginning. In the first place it was not known just what could be done in controlling water levels in this region of highly porous soil, underlain largely with very porous limestone. The precise extent of the effects of subsidence was not known. There was also the difficulty of titles, lack of public understanding of the problem and of the objectives of those who were undertaking to solve the problem.

Through surveys and research it has been shown that when dry these peat lands subside in two principal ways: They collapse like a compressed sponge when the water is removed and the bulk of the material is reduced enormously by processes of oxidation. Then it was ascertained by the Service technicians that at distances of about 3 miles back from the main canals, on each side, the Everglades land was not greatly affected by drainage, and the water-table there was high enough usually to keep fires under control. This discovery, along with other facts that have been revealed concerning the effects of drainage on peat lands, has materially contributed to establishing a sound basis for getting control of the problem.

Public feeling toward the undertaking has improved. At first some people of the locality didn't understand either the problem or the cooperative plans of the conservation program. For example, some truck growers near Lake Okeechobee, during a very rainy period accompanied by high-water condition thought a water-level control dam installed across one of the canals down toward the coast was backing water up on their lands. It was explained to

them that this was impossible because, as shown by the detailed topographic map which had been made of the area, the lowest part of the suffering trucking area was considerably higher than the uppermost reach of water held back by the dam. But this apparently was not sufficiently convincing, as one dam was dynamited. Subsequently there was none too much rain, and the same vegetable growing area was more dry than wet; a higher water-table was needed. It did not take long for these same people then to find out that water will not run uphill and that the dynamited dam if restored would not help this particular area any more than it damaged it with too much water.

The areas thus far treated are no longer affected by fires during the dry season. Much work remains to be done. Present restrictions on certain needed materials will slow down certain operations, but progress is continuing.

Summarizing: Investigative work already performed has revealed definite facts which provide a basis for actually getting control of the fire situation. Dams are being built across many of the canals where the areas had been drained excessively. This muck land near Lake Okeechobee has proved highly profitable for production of vegetables and sugarcane; some portions of the peat lands further out from the lake have also been successfully used for sugarcane - with applications of copper sulphate and other fertilizer materials. The water-table was so lowered, however, that in periods of drought, fires starting accidentally became a great menace and actually destroyed a lot of land.

Other things not hitherto known about the Everglades were and are being discovered. The soil survey which had been made on a portion of the area has been very helpful in providing information about the general character of the soil. The engineering problem of stopping the fires and saving the Glades land has proven to be the greatest problem, but it is believed that with the progress that has been made on this, the objectives of this program can be definitely accomplished.

(g) COOPERATIVE FARM FORESTRY

The budget schedule covers the allotments to the Agricultural Conservation and Adjustment Administration from the appropriation "Cooperative Farm Forestry," for cooperation with states in carrying out farm forestry operations, including intensive projects and technical service to farmers and to legally competent and adequate organizations of farmers. The appropriation is discussed in its entirety in the notes under that heading.

(h) LOANS, GRANTS AND RURAL REHABILITATION

The Budget schedule covers the allotment made in 1942 to the Agricultural Conservation and Adjustment Administration from the appropriation "Loans, Grants, and Rural Rehabilitation," for development of water facilities in connection with rural rehabilitation programs. The appropriation is discussed in its entirety in the notes under that heading.

(i) FLOOD CONTROL, GENERAL (TRANSFER TO AGRICULTURE)

The Budget schedule covers the allotment to the Agricultural Conservation and Adjustment Administration from the appropriation "Flood Control General (Transfer to Agriculture)," for surveys and operations in connection with national flood control program. The appropriation is discussed in its entirety under that heading.

(j) LAND UTILIZATION AND RETIREMENT OF SUBMARINE LAND,

Appropriation Act, 1943	\$1,591,182
Proposed transfers in 1944 estimates to other appropriations (see Budget schedules for details)	<u>-148,020</u>
Total available, 1943	1,443,162
Budget estimate, 1944	<u>1,126,120</u>
Decrease (including decrease of \$5,860 travel funds returned to surplus)	<u>-317,042</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
1. Acquisition of land	\$858,155:	\$209,148:	\$34,148:	-\$175,000 (1)
2. Management, operations planning, and improvement, and protection of land ac- quired	1,358,403:	1,228,154:	1,091,972:	-136,182 (2)
Covered into Treasury in ac- cordance with Public Law 674 :	- -:	5,860:	- -:	-5,860
Unobligated balance	69,004:	- -:	- -:	- -
Total estimate, 1944 and com- parable amounts 1943 and 1942	2,235,562:	1,443,162:	1,126,120:	-317,042

DECREASES

The decrease of \$317,042 in this item for 1944 consists of \$5,860 decrease in travel funds (returned to surplus in 1943) and:

(1) A decrease of \$175,000 under the project "Acquisition of Land", inasmuch as land purchases were discontinued under this item at the close of the fiscal year 1942, leaving only \$34,148 for completing work carried over from that year.

(2) A decrease of \$136,182 in the project for "Management, operations planning, and improvement and protection of land acquired" will be made through limiting the development in 1944 largely to that which will increase immediately agricultural and livestock production by rendering the land useful for pastures and limited cultivation.

Objective: The wartime aim of this program is to improve and make use of the 7-1/4 million acres of land administered directly under this appropriation in accordance with the maximum capabilities of the land in meeting production goals. Also, to continue, within available funds, the planned land use adjustments on the total acreage to accomplish the aim of the basic program.

The aim of the basic program is to rehabilitate areas blighted by the misuse of submarginal land and land not primarily suitable for cultivation through the acquisition, improvement, protection and proper management of such lands so as to bring about:

- (a) desirable permanent land use;
- (b) family earnings sufficient for the essentials of life and health, and for social and educational opportunities;
- (c) sound rural economy of the community for the development and maintenance of public services and facilities of a standard that will be a credit to the community, the State and the Nation.

The Problem and its Significance: In many areas a substantial proportion of the acreage in cultivation or subject to cultivation is unsuited to the growing of cultivated crops because of natural infertility, physical factors, location, or loss of productivity through misuse. Continuing the cultivation of such acreages has resulted in (a) further land deterioration; (b) lowering of the standards of living; (c) shrinkage of the local tax base, and (d) increasing the need for public assistance in the form of cash, goods, or work relief.

The income of the families occupying the submarginal farms has declined gradually. Families generally are stranded in their present locations, for there is no market for their properties. They no longer have the financial resources to relocate elsewhere or to make the shift to proper land-use; for instance from cash crop farming to grazing and still secure a living from the farms.

Solution of the human, land, and governmental problems in those areas where a substantial number of the farms are unsuited for cultivation, can be brought about only by drastic changes in land use and occupancy. These changes may involve one or more of the following: (a) relocation of families, both within the areas and by migration to other areas; (b) shifting of the use of land now in cultivation to grazing, or to forestry and associated uses; (c) revision in the type of economy to conform with changes in land use, (for example, from the growing of cultivated crops to livestock production, forestry, or part-time farming combined with forestry or other uses which will provide a permanent livelihood for the maximum number of families); (d) restoration of the land to productivity in those uses

for which it is adapted; (e) distribution of grazing, timber harvesting and other privileges at equitable charges among remaining families so that all or as many as possible will have the opportunity for a livelihood; and (f) providing of supplementary employment to families during the restoration of the utilization of tax-reverted lands, in services and facilities, and in organization and functions of local governmental units.

The many and far-reaching adjustments involved in changes in land use and **occupancy** are beyond the ability of individual families to bring about. Neither can the families acting together and with the aid of local governments make those adjustments. The authority in Title III of the Bankhead-Jones Farm Tenant Act provides for the making of changes in land use and occupancy, and the means whereby, through the coordination of the public programs and the cooperation of local governments, rehabilitation of land and people on submarginal farms can be permanently effected.

General Plan: The land purchase phase of this program has been deferred. Under this item no land is being purchased in 1943, and no funds are requested for use in 1944 for land purchase.

The whole emphasis on the program is now directed toward those activities which will make possible the maximum use of each acre of the land now held under this item plus that which may be acquired through gift or exchange, according to its capabilities, and for the improvement of the livelihood for as many families as possible who live in the areas in which this land use adjustment is being effected.

Much of the land held under this program, when seeded and fenced, may be used for grazing and pasture land, thus relieving other lands more suitable for cultivation for cultivated crops.

The land use adjustments needed on the land already purchased will be carried on uninterrupted, except that such improvements that require the use of strategic materials will be deferred until such materials are again available. The plan of work for 1944 includes (a) reseeding and other soil-stabilization activities, (b) fire protection, (c) construction of small stock-water facilities, and (d) some temporary minor repairs to existing facilities to protect the Government's investment until such time as permanent repairs may be made.

There is an increasing demand for grazing on LU projects in the farm states because of the farmers' efforts to increase their production of meat and milk products. In the range states, every acre of submarginal land needs to be set to work in production of beef, mutton, and wool.

It is estimated that the funds available in 1943 and the estimate for 1944 for improvement will be divided into the following categories of work in the percentage shown:

<u>Category of Work</u>	<u>Estimated Percentage in 1943</u>	<u>Estimated Percentage in 1944</u>
Range and pasture development	72	77.7
Erosion control	11.8	12.1
Forest development	3.9	5.2
Hay and crop land improvement .....	.3	1.0
Wildlife development .....	.3	.6
Administrative facilities and miscellaneous items	<u>11.7</u>	<u>3.4</u>
Total	100.0	100.0

The above groupings by category of work are somewhat arbitrary. For example, much of the work in several categories contributes to erosion control. Conversely, much of the erosion control work is preliminary to the use of certain land for range and other uses. No provision is made in the estimate for recreational activities.

Examples of Progress of Current Programs:

Acquisition of Land: Land purchases were discontinued under this item at the close of the fiscal year 1942. In 1943 the allotment for this project is being used entirely for consummating purchases initiated in 1942 and prior years. The majority of this work will be completed in 1943 although a small amount will carry over for completion in 1944. The type of work to be done in 1944 includes (a) title clearance actions, such as probates of estates, etc.; (b) clearing approximately 1,500 land purchase payments with the General Accounting Office following their audit; (c) completing action involving some 150 condemnation cases which are on dockets of the District Courts; (d) working with the tax collectors in remitting delinquent taxes and removing liens against the land; and (e) handling surveys and appraisal of land involved in exchanges with private owners and with divisions or agencies of state governments authorized by Public Law 683, approved July 28, 1942.

Management, operations planning, and improvement and protection of land acquired: Under direct administration of this project are 7-1/4 million acres and 1/4 million acres managed by state agencies, but under the custodianship of the Soil Conservation Service. The lands purchased under this program cost an average of approximately \$4.17 per acre. They were lands, for the most part, that were so poor and the people operating them were so destitute because of a variety of difficulties, that in years past hundreds of thousands of dollars of Federal funds were spent for relief of various types in the areas in which they were located. In addition, many owners of the land were unable to pay their taxes.

The Buffalo Creek Land Utilization Project area in Montana is a good example of what is being accomplished as a result of the activities provided under this appropriation. The Buffalo Creek State Grazing District leases 128,000 acres of county land, 21,000 acres of state land, 25,000 acres of railroad land, 6,337 acres of private land, and 71,000 acres of Soil Conservation Service controlled Title III land. The area leased by the Grazing District amounts to around 45% of the total land within the area. Prior to the establishment of the Land Utilization project in December 1937 much of this land was in uncontrolled use and was not producing the maximum benefits for the community, the State, and the Nation. The area is rapidly improving in productivity under controlled use, the improving of range facilities, and the seeding of formerly cultivated land. Livestock numbers are increasing and the 82 operators who are working together in this area are gradually improving their financial status and the stability of their operations. It is true that improved weather and economic conditions have contributed much towards this general improvement, but the progress made would not have been nearly so striking had the previous conditions of uncontrolled range continued and had the 24 submarginal farms, eliminated under the purchase program, remained in operation.

The county, state and railroad are leasing practically all the land they own to the district, thereby making available additional land for meeting production goals.

The development of an area of approximately 6,000 acres of submarginal land in New York for grazing purposes is another interesting illustration of what the submarginal program has done. Although this area is less than half improved, it is furnishing supplementary grazing for 128 dairy and livestock farmers within a radius of 40 or 50 miles of the project. Growing stock in the main are placed in these pastures where they graze in common with stock owned by other operators. This project points the way to more beneficial use of large acreages of lands not suitable for crop production but which can be developed successfully for pasture use. It is also demonstrating how groups of farmers can cooperate in controlling and utilizing in common lands of this nature which are distant from their dairy and livestock farms.

On the Cedar Creek Project in Missouri there remain 3,035 acres of land suitable for pasture that require soil preparation and application of limestone, fertilizer, and seed. With the funds available for the present fiscal year (1943) 600 acres of this land can be developed, while an additional acreage will be developed during the fiscal year 1944.

Unimproved pasture in that area normally produces 15 to 20 pounds of meat per acre per year. On improved areas on the project and on adjoining improved privately owned lands the meat production per acre is averaging from 200 to

225 pounds per acre per year. On improved acreage the cash income to the Government at a rental of 75¢ per animal unit month of grazing is from \$2.25 to \$4.00 per acre per year.

In the Plains States of the Dakotas and Montana, from 40% to 60% of these lands were tax-delinquent at the time of purchase. In the Lake States of Minnesota and Wisconsin, the situation was as bad or worse. The savings in local government costs for schools and roads brought about by relocation of the families occupying lands acquired are significant and offset to a considerable extent the loss in tax revenue due to the lands coming into Federal ownership. In some projects such as in the Beltrami Island Project, MN-LU-3, the annual savings in public costs are astounding. On this project the savings in school, road, and relief costs exceed the average tax collections effected previous to purchase by \$25,000 annually. Capitalizing this saving at 5% makes the purchase of the 81,000 acres worth, on this score alone, \$500,000 to the public. These lands actually cost less than \$400,000.

The grazing, cropping, and other uses during 1941 and the sale of improvements, mineral royalties, etc. produced revenue approximating \$289,000. All but \$60,000 of this, which resulted from mineral easements and sales of improvements, is subject to the 25% payment to counties. Therefore, approximately \$232,000 is being returned to the United States Treasury and the balance amounting to approximately \$57,000 paid to the counties in which the lands are located.

The financial returns to the Federal Government, and to the Counties, though substantial, are, however, not all important. The greater part of the benefits derived from the improvement and management of the range and pasture lands is what the people are getting out of it, and its contribution to the national welfare. Most of the people using these lands didn't have enough range or pasture before the reseeding was done, and before community pastures were established. Part of the lands used for grazing was in the hands of absentee owners and the operators were able to get only one-year leases. In this way there was little stability in the operations -- no assurance that they were going to have grazing continuously for their stock. Under such conditions the range was seriously abused, water and other needed facilities were not provided, and the operators were unable to make headway. But now they have stability and they have grass for their stock, and they are contributing in a very important way to increased production of food at a time when the Nation so critically needs more and more food. These projects are making an important contribution to the national Food for Freedom goals. During 1941 grazing permits were issued to farmers and ranchers for a total of 1,224,281 animal unit months of grazing on approximately 5,500,000 acres of range and pasture land held under Title III of the Bankhead-Jones Farm Tenant Act. This is equivalent to grazing for 200,000 cows for six months. Although the grass producing ability of these submarginal lands has increased tremendously through proper management, the development of water sources, fencing, and reseeding of submarginal farm lands formerly in cultivation, their ability to produce grass has not yet reached their maximum.

In addition to furnishing more feed for the production of meat, milk, and wool, there has been an increase in the amount of these products produced. This has been brought about through better livestock management practices, resulting in greater production per unit. The percentage of calves and lambs born has increased under proper management, the weights of calves and lambs at marketing times are considerably higher due to larger supplies of available feed. Replacement stock also has made greater gains on grass.

But there remains much to be done. The productivity of these lands will be increased considerably under proper management. The Service has been treating these lands as rapidly as practicable with available funds in order to increase their productivity and usefulness. They have been improved by such work as regrassing, providing stock water facilities, fencing, general erosion control, reforestation, construction of fire control and other beneficial facilities. Approximately 400,000 acres of land that was denuded when purchased has been reseeded. There remains, however, about 500,000 acres which also should be regrassed. This additional area when reseeded would furnish grazing for an additional 60,000 cows for six months. Plans have been made to reseed approximately 100,000 acres this year with funds available. With funds to be made available during the next fiscal year, it is planned to reseed about 100,000 acres and the same acreage each succeeding year until all lands suitable for producing grass are reseeded.

Considering that the Government is urging farmers and ranchers to produce more food, the Government itself has a responsibility for placing its lands into most productive use by reseeding and making other necessary improvements.

In addition to reseeding submarginal farm lands formerly in cultivation and rehabilitating overgrazed range lands, it is planned to fence and develop watering facilities for livestock and for other range and pasture improvements for efficient use of these lands so that submarginal land which has been a liability can be put to its most effective use in producing more Food for Freedom.

(k) PAYMENTS TO COUNTIES FROM SUBMARGINAL LAND PROGRAM, FARM TENANT ACT

The Budget schedule reflects the payment to counties of twenty-five percent of the net revenues received each calendar year from the use of lands held by the Secretary under Title III of the Farm Tenant Act, approved July 22, 1937.

MISCELLANEOUS

(1) PAYMENTS FOR AGRICULTURAL ADJUSTMENT, DEPARTMENT OF AGRICULTURE

An appropriation of \$296,185,000 was provided by the Supplemental Appropriation Act of 1936, approved February 11, 1936, to enable the Secretary to meet all obligations and commitments (including salaries and administrative expenses) theretofore incurred or to be incurred, and rental and benefit payments in connection with adjustment contracts entered into prior to January 6, 1936, under the provisions of the Agricultural Adjustment Act of 1933, to remain available until expensed.

By Public Law 589, 77th Congress, approved June 5, 1942, it was provided that no claim should be considered or paid from this appropriation unless presented to the Secretary within 120 calendar days from the date of approval thereof, and that the unobligated balance remaining in this appropriation 180 days after the date of approval of the Act of June 5, 1942, should be covered into the surplus fund of the Treasury, except that not to exceed \$25,000 of such unobligated balance should remain available for not more than one calendar year for administrative expenses.

The Budget schedule covers obligations incurred during the fiscal year 1942 and estimated obligations to be incurred during the fiscal year 1943 (from July 1 to December 2, 1942, inclusive) for administrative expenses in the settlement of claims and accounts arising in connection with the liquidation of moral obligations incurred under the production adjustment programs initiated under authority contained in Section 12(b) of the Agricultural Adjustment Act of May 12, 1933, and which were invalidated by the Supreme Court decision in the case of United States vs Butler.

The statement below indicates the amount of the appropriation covered into surplus:

Original appropriation	\$296,185,000
Obligations incurred prior to fiscal year 1942	-295,812,222
Obligations, fiscal year 1942	-28,247
Obligations, fiscal year 1943 (to December 2, 1942)	-10,035
Transferred to "Administrative Expenses, Payments for Agri- cultural Adjustment"	<u>-25,000</u>
Amount covered into surplus	309,496

(m) ADMINISTRATIVE EXPENSES, PAYMENTS FOR AGRICULTURAL ADJUSTMENT

The Budget schedule reflects obligations under the \$25,000 reappropriated by Public Law 589, 77th Congress, approved June 5, 1942, from the unobligated balance of the appropriation of \$296,185,000 provided by the Act of February 11, 1936, for administrative expenses in connection with the settlement of claims and accounts incident to the agricultural adjustment programs in effect prior to January 6, 1936, under the Agricultural Adjustment Act of 1933, as amended, and related legislation.

(n) SALARIES AND EXPENSES, AGRICULTURAL ADJUSTMENT ADMINISTRATION

The Budget schedule covers an allotment of \$214,489 made to the Agricultural Adjustment Agency for use during the fiscal year 1942 from funds appropriated by Section 12(a) of the Agricultural Adjustment Act of May 12, 1933. The funds so allotted were used in connection with adjustment programs and for expenses of developing, representing and protecting the interests of

consumers during the formulation and administration of farm programs in accordance with the declaration of policy contained in Section 2(3) of the Agricultural Adjustment Act of 1933, as reenacted by the Agricultural Marketing Agreement Act of 1937.

The Budget schedule also lists allotments and transfers to other agencies of the Department detailed schedules of which appear under the respective agencies in the budget. The following tabulation indicates the obligations incurred under this appropriation during the fiscal year 1942 and estimated obligations for the fiscal years 1943 and 1944.

Project	1942	1943	1944
<u>Allotments to:</u>			
Agricultural Adjustment Agency	\$214,489:	- -	- -
Bureau of Home Economics	5,000:		
Extension Service	25,000:	- -	- -
Office of Foreign Agricultural Relations .	31,800:	- -	- -
International Production Control Committee :	13,500:	13,500	13,500
Agricultural Marketing Administration	1,059,152:	- -	- -
Total Allotments	1,348,941:	13,500	13,500
<u>Transferred to:</u>			
Salaries and expenses, Office of Secretary of Agriculture	65,250:	- -	- -
Salaries and expenses, Office of Information	38,500:	- -	- -
Salaries and expenses, Library	2,000:	- -	- -
Salaries and expenses, Office of Solicitor :	135,120:	- -	- -
Salaries and expenses, Bureau of Agricultural Economics:			
Economic investigations	441,450:	- -	- -
Crop and livestock estimates	100,000:	- -	- -
Marketing Agreements, hog cholera virus and serum	30,000:	30,708	30,600
Exportation and domestic consumption of agricultural commodities	- -:	- -	175,000
Total transfers	812,320:	30,708	205,689
Total obligations	2,161,261:	44,208	219,189
1941 balance available in 1942	-2,540,110:	- -	- -
1942 balance available in 1943	+378,849:	-378,849	- -
1943 balance available in 1944	- -:	+334,641	-334,641
1944 balance available in 1945	- -:	- -	+115,452
Total estimate or appropriation	- -:	- -	- -

TRUST ACCOUNTS

(o) GRAIN MOISTURE CONTENT AND GRADE DETERMINATIONS FOR
COMMODITY CREDIT CORPORATION, AGRICULTURAL CONSERVATION
AND ADJUSTMENT ADMINISTRATION

The Budget schedule reflects obligations for administrative expenses and expenses of local Agricultural Conservation Associations in inspecting, sampling, grading, sealing, testing, and other work incident to the storing of grain and making loans thereon under the Commodity Loan Programs.

Since the Agricultural Adjustment Agency has in its field offices in the various states equipment and facilities for making the moisture tests which are final factors in determining grades and therefore loan eligibility of the harvested crop offered as collateral security for loans, the Commodity Credit Corporation avails itself of such services, facilities and personnel in accordance with Section 302(i) of the Agricultural Adjustment Act of 1938, as amended.

Funds are advanced by the Commodity Credit Corporation for paying obligations incurred by the Agricultural Adjustment Agency in rendering these services, which funds are deposited to a trust receipt account and appropriated therefrom to the trust expenditure account "Grain Moisture Content and Grade Determinations for Commodity Credit Corporation".

(p) INDEMNITY FUND, COUNTY ASSOCIATIONS

The Budget schedule covers assessments made against the county agricultural conservation associations to insure the United States of America, the county agricultural conservation association, and any other agencies or persons deemed by the Agricultural Adjustment Agency to be entitled to reimbursement for losses of money or any other property caused by negligence or willful malfeasance of an officer or employee of the association.

(q) UNDISTRIBUTED COTTON PRICE ADJUSTMENT PAYMENTS

The Budget schedule covers 1935 cotton price adjustment payments which could not be paid to the persons entitled thereto by the trustees who received the payments under such program.

(r) PROCESSING TAXES, SUGAR, PUERTO RICO

The Budget schedule covers taxes collected from the processing of sugarcane in Puerto Rico, and held as a separate fund to be used and expended for the benefit of agriculture as the Secretary of Agriculture, with the approval of the President, shall direct.

(s) PROCESSING TAXES, SUGAR, HAWAII

The Budget schedule covers taxes collected from the processing of sugarcane in the Territory of Hawaii, and held as a separate fund to be used and expended for the benefit of agriculture as the Secretary of Agriculture, with the approval of the President, shall direct.

(t) PROCEEDS, DISTILLED SPIRITS INDUSTRY, PARITY PAYMENTS

The Budget schedule covers funds collected under marketing agreement No. 27, entered into by certain members of the distilled spirits industry and the Secretary of Agriculture (sections 2 and 8, Act May 12, 1933, 48 Stat., pp 31-41; U.S.C., title 5, Sections 601-622).

SUPPLEMENTAL FUNDS
AGRICULTURAL CONSERVATION AND ADJUSTMENT ADMINISTRATION

There appears in the Department of State section of the Budget a schedule showing estimated obligations for the fiscal year 1944 under the heading "Cooperation with the American Republics" reflecting a proposed transfer to the Department of Agriculture for training in soil conservation of South American interns.

(Not otherwise explained)

(1) Direct Allotments

Project	Obligations: 1942	Estimated obligations: 1943	Estimated obligations: 1944
<u>Special and Technical Investigations,</u>			
<u>International Joint Commission, United</u>			
<u>States and Great Britain (Transfer to</u>			
<u>Agriculture):</u> For appraisal of results			
of increasing the height of groundwater			
table of lands adjacent to Kootenai			
Lake	\$1,496	\$1,500	\$1,500
<u>Public Works Administration (Allotment to</u>			
<u>Agriculture):</u> For completion of			
developments under way on various land			
utilization projects	155,806	77,920	--
<u>Emergency Relief, Agriculture, Planning</u>			
<u>Review of W.P.A. Projects (Transfer</u>			
<u>from W.P.A.):</u> For planning and review			
of W.P.A. projects	5,364	1,867	--
<u>Emergency Relief, Agriculture, Soil Con-</u>			
<u>servation Service, Federal Non-construc-</u>			
<u>tion Projects (Transfer from W.P.A.)</u>			
<u>and Emergency Relief, Agriculture, Soil</u>			
<u>Conservation Service, Federal Con-</u>			
<u>struction Projects (Transfer from</u>			
<u>W.P.A.):</u> For a national program of soil			
conservation	793	--	--
Physical improvements in connection			
with the land utilization program	5,811	--	--
Total, as above	6,604	--	--

Project	Estimated obligations,		
	Obligations:	Obligations:	Obligations:
	1942	1943	1944
<u>Working Fund, Agriculture, Soil Conservation Service, (Advance from Flood Control, General):</u> For supplying detailed rainfall records to the Office of the Chief of Engineers, United States Army	\$2,000	\$2,000	--
<u>Working Fund, Agriculture, General:</u> To cover salary of specialist cooperating with the Chinese government in the study of agricultural problems in China	--	5,770	--
<u>Working Fund, Agriculture, General, (Emergency Management):</u> For providing training for Latin American students in the principles and practices of soil and moisture conservation	--	76,000	--
<u>Working Fund, Agriculture, Soil Conservation Service (Advance from Public Roads Administration, Federal Works Agency):</u> To furnish hydrologic information to the Public Roads Administration	--	2,400	--
<u>Working Fund, Agriculture, (Transfer from War Department) (Soil Conservation Service):</u> Providing of military information to Corps of Engineers	--	10,498	--
Mapping of strategic areas for Corps of Engineers	117,634	274,101	--
Reproduction of safety posters and Air Forces News Letter	6,713	6,037	--
Preparation of aeronautical approach charts	--	110,000	--
Furnishing of technical services to Quartermaster Corps on erosion control problems	47,082	--	--
Acquisition costs (except direct cost of land) incident to purchase of land for military purposes	189,795	1,200	--
Total, as above	361,224	401,836	--

Project	Obligations 1942	Estimated obligations, 1943	Estimated obligations, 1944
<u>Emergency Fund for the President, National</u>			
<u>Defense (Allotment to Agriculture) (Agricultural Conservation and Adjustment</u>			
<u>Administration):</u> Payment of travel and			
special per diem allowances in connection			
with the decentralization of employees			
from Washington, D. C. to various points			
in the field	\$9,384	\$1,524	--
<u>TOTAL, SUPPLEMENTAL FUNDS (Direct allot-</u>			
<u>ments)</u>	541,878	570,817	1,500

SUPPLEMENTAL FUNDS:

(2) Indirect Allotments

(Financed through other Government agencies)

Project	Obligations 1942	Estimated obligations, 1943	Estimated obligations, 1944
<u>Civilian Conservation Corps (Allotment</u>			
<u>through the War Department)</u>	6,448,212	515,000	--
<u>Selective Service System (Transfer to War)</u>			
<u>For all expenses, Conscientious Objectors,</u>			
<u>Soil Conservation Service</u>	92,230	218,867	--
<u>TOTAL, SUPPLEMENTAL FUNDS (Indirect</u>			
<u>allotments)</u>	6,540,442	733,867	--

PASSENGER-CARRYING VEHICLES

It is not contemplated that any new vehicles will be purchased in 1944 from funds available to the Agricultural Conservation and Adjustment Administration. It is expected that 1,337 old vehicles will remain in use.

FARM SECURITY ADMINISTRATION

(a) LOANS, GRANTS, AND RURAL REHABILITATION

Appropriated Funds:

Appropriation Act, 1943:

Loans, Grants and Rural Rehabilitation	\$37,819,557 1/	
Water Facilities, Arid and Semiarid Areas	202,585 1/	\$38,022,142
Proposed transfers in the 1944 estimates to other appropriations (see Budget schedules for details)	.....	-716,089
1942 funds reappropriated in 1943	....	5,000,000
Total available, 1943	.....	42,306,053
Budget estimate, 1944	.....	36,607,573
Decrease (including decrease of \$537,831 travel funds returned to surplus)	.....	-5,698,480

Authorization for borrowings from R.F.C. for loans:

Authorization, 1943	97,500,000
Authorization, Budget estimate, 1944	...	97,500,000
Increase or decrease in loan funds, 1944	.....	- -

Net total funds available:

1943	.....	139,806,053
Estimate, 1944	.....	134,107,573
Decrease (including decrease of \$537,831 travel funds returned to surplus)	....	-5,698,480

1/ The Budget provides for the consolidation of these two items for 1944.

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Rural Rehabilitation services and assistance loans and grants, including committees:				
a. Rural rehabilitation loans:	\$123,980,175:	\$96,500,000:	\$96,500,000:	\$ - -
b. Rural rehabilitation grants:	13,187,724:	4,000,000:	2,000,000:	-\$2,000,000 (1)
c. Rural rehabilitation services:				
1. Farm and home management assistance:	18,231,108:	17,015,640:	16,520,213:	-495,427 (2)
2. Investigations of applications, and making, collecting, and servicing of loans and grants:	12,154,072:	11,343,761:	10,440,084:	-903,677 (3)
2. Tenure improvement and farm debt adjustment, including committees:	2,050,910:	1,055,000:	1,055,000:	- - (4)
3. Rehabilitation projects, including technical services:	471,422:	175,000:	350,000:	+175,000

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
				(5)
4. Migratory labor camps	4,432,441:	1,400,000:	- -:	-1,400,000
5. Water facilities, arid and semiarid areas	1,413,017:	1,318,649:	1,278,649:	-40,000
6. Administration	6,960,749:	6,350,000:	5,855,000:	(7) -495,000
Covered into Treasury in accord- ance with Public Law 674	- -:	537,831:	- -:	-537,831
Continuing allotments and trans- fers to other appropriations and Departments (see Budget schedules for details)	548,607:	110,172:	108,627:	-1,545
Unobligated balance	1,950,377:	- -:	- -:	- -
Total available	185,380,602:	139,806,053:	134,107,573:	-5,698,480
Transfers in the estimates to other appropriations (see Budg- et schedule for details)	+980,711:	+716,089:	- -:	- -
Net estimated appropriation, re- appropriation, and R.F.C. loan funds, 1944, and comparable amounts, 1943 and 1942	186,361,313:	140,522,142:	134,107,573:	- -
1941 balance reappropriated for obligation in 1942	-6,861,313:	- -:	- -:	- -
1942 funds reappropriated for obligation in 1943	+5,000,000:	-5,000,000:	- -:	- -
Total direct appropriation and loan authorization	184,500,000:	135,522,142:	134,107,573:	- -

DECREASE

The decrease of \$5,698,480 in this item for 1944 consists of \$537,831 decrease in travel funds (returned to surplus in 1943) and:

- (1) A decrease of \$2,000,000 under the heading "Rural rehabilitation grants." This leaves a net appropriation for this purpose of \$2,000,000 which will provide for emergency uses in flood, drought, and other stricken areas and for improvement of health and sanitation facilities in extremely needy cases. The amount requested will be supplemented, however, by the use of funds available under State Rural Rehabilitation Corporation trust fund.
- (2) A decrease of \$495,427 under the project "Farm and home management assistance." There will be a decrease in the total number of new loans due to an increase in the size of loans to enable expansion in production facilities. Although the cumulative work load of the supervisory personnel will be increased, improvements in efficiency and additional emphasis on the use of group meetings will aid in this reduction.

- (3) A decrease of \$903,607 under the project "Investigation of applications and making, collecting, and servicing of loans and grants." This reduction will be effected by the discontinuance of certain servicing functions and increasing the work load of the field supervisory personnel. Many supervisory functions will be discontinued with emphasis being placed only on that part absolutely essential to obtain increases in the production of food.
- (4) An increase of \$175,000 under the project "Rural rehabilitation projects, including technical services" to make the necessary improvements and betterments on projects in order to expedite their sale and ultimate liquidation. (See "Work Under This Appropriation").
- (5) A decrease of \$1,400,000 under the project "Migratory labor camps." The migratory labor camp program as such is being discontinued under this paragraph.
- (6) A decrease of \$40,000 under the project "Water facilities, arid and semi-arid areas." This project is now a merger of "Water utilization projects, including technical services" and the separate appropriation "Water facilities, arid and semiarid areas." This decrease represents the elimination of any amount for grants.
- (7) A decrease of \$495,000 under the project "Administration." This reduction will be made possible through improvements in organization, streamlining of procedures, and other economies.
- (8) A reduction of \$1,545 due to eliminating the allotment hitherto made to the Forest Service for administering the Sublimity and Drummond rehabilitation projects.

CHANGES IN LANGUAGE

The Budget estimate provides the following changes in the language of this item (new language underscored, deleted matter enclosed with brackets):

1. ***projects involving provision of water facilities [; and (6) not exceeding \$1,400,000 for operation and maintenance of existing migratory labor camps; \$37,819,557, together with not to exceed \$5,000,000 of the unobligated balance of the appropriation made under this head for the fiscal year 1942], including such facilities authorized by the Act of August 28, 1937, as amended (16 U.S.C. 590r - 590x, 590z - 5, \$36,607,573 ***".

The deleted matter (1) eliminates the authorization to expend \$1,400,000 for operation and maintenance of existing migratory labor camps since no funds are included in the Budget for this purpose, and (2) eliminates the reappropriation language carried in the 1943 Act, since no reappropriation for 1944 is proposed in the Budget.

The new language referring to the Act of August 28, 1937, is amended, ("Pope-Jones Water Facilities Act") is made necessary due to the elimination of the appropriation "Water Facilities, Arid and Semiarid Areas" as a separate appropriation item, and the inclusion under, "Loans, Grants and Rural Rehabilitation" of the funds formerly provided as a separate item for carrying out the purpose of the Pope-Jones Act.

2. "*** purchase, operation and maintenance [, and exchange at the seat of government and elsewhere,] of motor-propelled passenger-carrying vehicles ***".

The authority to exchange vehicles is eliminated from this paragraph of the bill, (as well as other places where it was formerly carried) since the Independent Offices section of the Budget for 1944 provides authority for the Government as a whole to exchange this type of equipment.

3. "***[No part of the appropriation contained in the Department of Agriculture Appropriation Act, 1943, under the heading "Loans, Grants and Rural Rehabilitation," shall be available to pay the compensation of any person appointed in accordance with the civil service laws]".

The Budget provides for the elimination of this proviso since the work done under this appropriation is integrated with work done under a number of other appropriations under which employees being paid therefrom have acquired civil-service status. All the employees, regardless of the source of funds from which their salaries are being paid, work side by side and often do similar work. The recommended deletion of this language will eliminate inequities and relieve many administrative difficulties. It is significant to note that the removal of this prohibition will not in itself increase the salaries of the field employees of the Farm Security Administration.

WORK UNDER THIS APPROPRIATION

Project 1. Loans:

Objective: To increase agricultural production, by providing those farmers who are unable to get credit elsewhere with the necessary capital to expand operations. With acute farm labor shortages developing it is necessary for the Nation to depend more upon the labor of the family-type farm operator. The aim of the rural rehabilitation program is to see to it that the labor of every farm family it can reach is put to its maximum possible use.

The Problem and its Significance: 1942 with all conditions favorable saw a bumper food crop harvested in this country. Yet, this Nation's need for food will be much greater in 1943 and 1944 than in 1942. The main reason for increased food needs in 1943 and 1944 is as follows:

First: Three to five million additional men in the armed forces in 1943 and 1944 will increase food needs greatly. The Bureau of Home Economics estimates that the average man consumes much more food as a soldier than as a civilian.

Moreover, many of these soldiers will come from farms where most of their food was produced. In the Army, not only does the soldier consume more, but his food must have been preserved, stored, and transported through the various food channels to all parts of the world wherever he may go. Loss and deterioration under such conditions must be great. A submarine can sink more food in a minute than thousands of farms can grow in a year.

Second: The wartime increased purchasing power of scores of millions of the Nation's workers will reflect itself in increased demand for food. Workers historically "bring home more meat" when they get a steady job or get a salary increase.

Third: Secretary Wickard has so often said, "Food will win the War and write the Peace." Food is a weapon the same as bullets or cannons. Certainly we do not stop with the production of enough bullets and cannons for a year's needs; we produce a stock-pile of munitions to meet any emergency.

Unless steps are taken to prevent it, a decline in food production in 1943 and 1944 may take place as a result of: (a) restrictions on the manufacture of farm machinery; (b) restrictions on the use of fertilizer; (c) lack of marketing and transportation facilities; (d) failure of the exceptional weather of 1942 to continue; and (e) finally and most important of all the shortage of manpower on the farms.

Steps are already being taken by the Department of Agriculture and other Government agencies to meet the crisis in manpower on the farms. Workers are being transported to areas of the greatest need; draft deferment has been granted to livestock farmers; prices have been allowed to advance to encourage the expansion of production. But much more needs to be done. Direct action to see that no farm family is producing at less than full capacity is of paramount necessity.

The problem of organizing the small farms into efficient productive units is the primary war work under the rural rehabilitation loan program. The program will be judged solely upon its success or failure in bringing about the proper combination of available resources and available manpower which are at the present time separated and uncoordinated.

It has been variously estimated that there will be a loss of between 500,000 to 1,000,000 workers on farms between the summer of 1942 and the summer of 1943. How can the remaining farm workers expand their production sufficiently to maintain the high level reached in 1942? It is apparent that the solution must be in the fuller use of labor of those who have not been working to full capacity in the past. How many such farms exist today and how can they expand?

Existence of idle labor: The latest census figures indicate that over two and a half million bona fide farm operators each produced in 1939 between \$250 and \$1,000 worth of farm products including what was x

consumed on the farm (see Table 1 and Figure 1). Even with the migration to industry and to the armed forces there remain almost two million of these farms which produce less than 10 percent of the Nation's total agricultural production going to the market.

The implications of these figures are that this vast army of farmers were not being put to full-time employment. To produce the typical income of this group of farmers requires working a pathetically meagre farm. For example, a typical farmer with an income level below \$1,000 produced in 1939 on an average about \$600 worth of farm products. In the Midwest this income could have been obtained from 2 milk cows, 2 calves, 20 hogs, 50 hens, and a garden, as follows:

2 cows producing 170 lbs. butter-fat each at \$0.30 ...	\$102
2 calves vealed at \$15.00 each	30
20 hogs averaging 200 lbs. each at \$0.09	360
50 hens producing 7 doz. eggs each at \$0.25	87
A garden	<u>40</u>
Total production	<u>619</u>

Obviously, caring for these livestock and the small acreages of crops necessary to feed them in no way approximates full employment for the typical low-income Midwest farm family.

The same story of under-employment can be told for the hundreds of thousands of farmers in the South who in 1939 averaged a production of farm products sold, traded, or used at home, totaling only \$600. This volume of production could have come from the following production:

10 acres of cotton - 250 lbs. lint per acre at \$0.11 .	\$275
700 lbs. cotton seed per acre at \$0.01	70
1 cow producing 170 lbs. butter-fat at \$0.30	51
1 calf producing 150 lbs. veal at \$0.09	14
5 hogs averaging 175 lbs. pork each at \$0.09	79
50 hens producing 7 doz. eggs each at \$0.25	87
A garden	<u>40</u>
Total production	<u>616</u>

There are nearly 447,000,000 idle-man-days per year on these small farms. This is shown together with additional lost man-days for the \$1,000 - \$1,500 group in the table below:

Value of Farm Pro- duction - 1939	: Number of Farmers: 1939	: Estimated Number of Idle: Man-days per Farm	: Total Number of Idle Man-Days
\$0 - \$250	: 1,233,000	: 0 <u>a/</u>	: 0
250 - 600	: 1,692,000	: 180 <u>b/</u>	: 304,560,000
600 - 1,000	: 1,054,000	: 135 <u>c/</u>	: 142,290,000
1,000 - 1,500	: 709,000	: 68 <u>d/</u>	: 48,212,000
1,500 - 10,000	: 1,311,000	: 0	: 0
10,000 and over	: 58,000	: 0	: 0
Unclassified	: 40,000	: 0	: 0
TOTAL	: 6,097,000	:	: 495,062,000

a/ It is assumed that these operators are non-farmers - i.e., retired or part-time operators.

b/ It is assumed that 40 percent of the 450 days family labor is wasted.

c/ It is assumed that 30 percent of the 450 days family labor is wasted.

d/ It is assumed that 15 percent of the 450 days family labor is wasted.

Since manpower is the key war shortage, it is evident that the productivity represented by these 495,062,000 idle man-days must be utilized next year and the year after.

These estimates are borne out by actual studies. The Bureau of Agricultural Economics found that the typical two-mule Delta cotton farm producing cotton, corn, and a small amount of livestock requires a total of only 2,300 man-hours of labor per year. The amount of family labor actually available is 4,080 man-hours. Therefore, except during the two or three months of cotton chopping and picking, the family labor is less than half employed. A similar picture of under-employment could be given for small, low-income farmers in all other areas of the Nation.

Obstacles to production: The reasons why these small farmers have been unable to utilize their labor fully in producing food are several. The most important single obstacle facing them is the lack of resources--land, livestock, equipment, and operating capital. Other obstacles and their removal are discussed under other projects under this appropriation.

A farmer, no matter how willing he may be, no matter how high prices may become, is unable to expand his operations unless he has the resources with which to work. The rural rehabilitation loan has been designed to provide these resources when he is unable to obtain them elsewhere.

Purposes of loan:

1. By means of such a loan the small farmer is able to add to his livestock. To expand a dairy herd from two cows to eight or ten or more is perfectly feasible and practical on many small farms. These farm operators can successfully make tremendous expansions, since they do not use machinery and have much idle time which might well be gainfully employed. The low-income operator, often fairly old, and usually with a large family to support, often

cannot be moved to a large farm as a hired hand, even if he were willing to do so. The Department of Agriculture intends to facilitate the supply of hired hands to the large commercial farms as much as possible. But as a practical matter there are very definite limitations to the extent with which this can be done, and those low-income operators who are to remain operators must be given the opportunity to acquire the resources they need for expansion. It is folly to endanger future production by the slaughter of breeding and producing livestock while there is any possibility of maintaining them on other farms.

2. The rural rehabilitation loan enables a farmer to operate a larger farm through the lease of additional land. The 1940 Census reported over one-third of all operators with less than 50 acres of land. This lower-third, with farms averaging 22 acres in size, harvested an average of only 12 acres of crops. Rural rehabilitation borrowers have increased the size of their farms on an average of 33 percent since coming in the program.

3. Some of the simpler types of equipment such as fencing materials, hand tools, and building materials can be made available by rural rehabilitation loans. In many sections of the country very simple barns and sheds are all that are needed for a considerable expansion of operation, particularly in livestock enterprises.

4. Operating capital for feed and seed and such fertilizers as are available is also supplied by such loans. The difference between keeping a heifer or slaughtering it, or of fattening out hogs or butchering them before they are full grown, or of feeding proper or improper diets to livestock in general, often is determined by whether or not sufficient operating capital is at hand.

5. Disease and physical disability, widespread among low-income farmers, prevent full production. In 21 typical counties in 17 states, thorough physical examinations were given in 1940 to rural rehabilitation borrowers and their families - 11,497 people. An average of three and one-half defects were found for every man, woman, and child. It is impossible for a sick family to do a good job of farm production. The health program, including medical loans, has demonstrated that this "poor health" obstacle can be substantially removed.

Examples of Progress and Current Program: Low-income farmers can produce if given proper opportunities. The eight years' experience of the rural rehabilitation program in assisting low-income farmers is good evidence of how great an expansion can take place on low-income farms. Furthermore, such expansion can be concentrated in those productive activities which are most closely related to war needs.

1. Families on the rural rehabilitation program have made greater increases in gross output than have other families. A comparison of the increases in gross income of rural rehabilitation borrowers since coming

in the program with the increases in gross income made by all farmers from 1939 through 1941, shows this to be true. (See Figure 2.)

2. A recent BAE study of standard rural rehabilitation borrowers in all states showed that most of these families had made substantial increases in food production for sale and for use at home.

3. A recent survey of standard rural rehabilitation borrowers showed these families had made the following increases since coming in the program (see also Figure 3 and Tables II and IIa):

Net Income	- up 80 percent
Net Worth	- up 43 percent
Home Use Production	- up 101 percent

4. An analysis of 1942 war food production plans of rural rehabilitation borrowers shows important increases over 1941. Following are some examples of these increases:

Cornbelt - Among 27,000 borrowers, three out of 5 planned to increase hogs an average of 15 head; three out of 5 planned to increase eggs an average of 650 dozen.

Lake States - 1,300 borrowers planned to increase milk an average of 8,680 pounds; pork - 1,000 pounds; and eggs - 190 dozen.

Southern
Appalachian
States - 8,915 borrowers planned to increase on the average 3,320 pounds of milk; 3 pigs; and 176 dozen eggs per farm.

Mountain Area - 384 borrowers planned to increase on the average 274 pounds of butterfat; 1,050 pounds of pork; and 228 dozen eggs.

Great Plains - Among 2,610 borrowers, practically every one planned to increase hog production; one in every 3 borrowers planned an increase of four or more litters.

5. Secretary Wickard's Interbureau Committee on Wartime Food Production Adjustments made this statement in the August report about the productive capacity of small farmers:

"Agricultural and industrial production are benefiting by the wartime contribution of low-income farmers who have been inadequately employed in the past. Thousands of these small farmers have been enabled to contribute to the agricultural war effort by loan programs that have provided stock, equipment, and feed. Many have gone to war industries or other farms where their help was badly needed."

It has been demonstrated that this larger assignment can be handled under this program:

1. There presently exists a highly trained field staff of farm and home supervisors experienced in working with low-income farmers and located in the areas where food production problems are greatest.

The Nation's idle manpower is located almost exclusively on the small farms where insufficient capital resources are available and where inadequate managerial techniques are employed. It has been on these farms that the Farm Security Administration has been working for eight years to put low-income farm families to work at well-rounded and productive farm operations. The following table shows the location of the present caseload:

Area	: Idle Manpower on Farms :	: Caseload :
West	: 5%	: 7%
Northeast	: 7%	: 4%
South	: 62%	: 56%
Midwest	: 19%	: 20%
Great Plains	: 7%	: 13%

As further evidence on this point, four-fifths of the 1,079,000 farm families known by Farm Security Administration farm and home supervisors to need rural rehabilitation loans and guidance are located in the South and Midwest. (See Figure 4.)

2. Under the rural rehabilitation program \$687,382,000 has been loaned to small farmers and groups of small farmers, during the past seven fiscal years. (See Table III for distribution by states by fiscal years.) Approximately 48¢ of the average original standard rural rehabilitation loan dollar has been used by small farmers to obtain equipment, machinery, livestock, fertilizer, and limestone - all vitally needed for expanded food production. Another 26¢ has been used for farm operating expenses - feed, seed, supplies, machinery repairs, etc. Only 7¢ was used for family living expenses. (See Figure 5.)

The Farm Security Administration collection record is remarkable in view of the fact that the small farmers served had been refused credit elsewhere, were operating the smaller and less productive farms, were following the least efficient farm practices; and, moreover, that rehabilitation instead of collections has been stressed in the program. (See Tables IV and V.) The number of abandonments and liquidations have been comparatively small, there having been a total of 92,721 as of June 30, 1942. (See Table VI.)

As may be seen in Figure 6, collections in 1943 will be so great that, despite the lending of approximately \$97,500,000 in that year, the amount outstanding at the end of 1943 will be less than at the end of 1942.

It should also be noted that the proportion of total principal repayments to total matured principal has been increasing each year and by the end of the 1942 fiscal year was greater than 83 percent. (See Figure 7.) The amount of \$94,863,887 was collected during the fiscal year 1942 and the cumulative collections to June 30, 1942, are \$262,367,909 of principal and \$35,130,580 of interest, or a total of \$297,498,489. It is estimated that during the fiscal year 1943 approximately \$115,000,000 to \$120,000,000 will be collected, and that approximately the same amount will be collected during the fiscal year 1944.

3. Farm Security Administration has helped 192,000 small farmers make more efficient use of their limited resources through cooperative use of farm machinery and sires.

The small operator has thus obtained the use of equipment and services that he could not purchase by himself. Through county-wide purchasing and marketing associations, he has bought needed production items, such as seed, feed, and fertilizer, at a substantial saving, and has marketed his valuable wartime products cheaply and effectively. Over half of the 22,000 small Farm Security Administration community and cooperative services are farm machinery services. (See Figure 8.) These services are located in every state, but are more heavily concentrated in the Midwest and South. (See Figure 9.)

4. The health program has proved that the "ill health" obstacle can be overcome. Over 604,000 individuals in 114,880 low-income families have been aided by Farm Security Administration medical and dental associations. On March 31, 1942 there were 995 such health service plans in operation. Families thus aided are able to eliminate part of the wasted manpower due to disease and sickness.

The program for 1944: The following paragraphs outline what can be done in 1944 with the funds requested:

1. The caseload at the beginning of 1944. On July 1, 1943, it is estimated that there will be 468,000 active standard rural rehabilitation borrowers. The basis for this estimate is as follows:

On June 30, 1942, there were 453,000 active standard rural rehabilitation borrowers. Funds available for the 1943 fiscal year will enable Farm Security Administration to make loans to 85,000 additional small farmers. Taking into consideration those who will repay their loans and those who will move to town, it is estimated that there will be 468,000 active borrowers on June 30, 1943.

2. Small farmers reached in 1944. With \$97,500 loan funds available for 1944, it is estimated that 75,000 additional low-income farmers can be brought into production for that year. Counting the 468,000 old borrowers who will continue to be serviced, 543,000 small farmers will be producing in the Farm Security Administration wartime food production program in 1944.

3. Increased food production in 1944. Our estimates of food production increases which may be expected from the new borrowers to whom loans will be made in 1944, and the old borrowers who will still be on the program, are as follows:

		: Total Increase in Production in 1944 over 1942 by			
		: 468,000 Old :	75,000 new :	543,000	
		: Standard RR :	Food for Freedom :	Total	
		: Borrowers ^{a/} :	Borrowers ^{b/} :	Borrowers	
		: (1000) :	(1000) :	(1000)	
Milk	lbs.:	314,634	156,306	470,940	
Pork & Lard (dr. wt.)	lbs.:	79,695	39,878	119,573	
Chickens (dr. wt.)	lbs.:	1,850	3,420	5,250	
Eggs	doz.:	9,470	17,780	27,250	
		:	:		
Soybeans	bu. :	312	180	492	
Peanuts	bu. :	1,154	414	1,568	
		:	:		
Tomatoes (canning)	bu. :	243	542	785	
Peas (canning)	lbs.:	4,434	9,900	14,334	
		:	:		

a/ These are the estimated number of active borrowers who will already be receiving assistance as of the end of the fiscal year 1943.

b/ These are the additional low-income farmers to whom new loans will be made during the fiscal year 1944.

A large part of this increased production would be available for sale; for example, three-fourths of the milk; over four-fifths of the pork, lard, and eggs; and all of the soybeans and peanuts. Increased production is shown only for some of the vital war foods. Significant increases will also be made in beef, wool, mutton, sugar beets, sugar cane, sweet potatoes, Irish potatoes, and general canning crops.

Past experience indicates that 200,000 of the borrowers already on the program will be made supplemental loans in the amount of \$45,000,000 during the fiscal year 1944. There would remain \$52,500,000 which, it is estimated, would provide for the making of loans to 75,000 new borrowers. Original loans in 1944 will average approximately \$700, which is higher than the same average size of the loans estimated to be made in the fiscal year 1943. This average is somewhat higher than in previous years because of increased prices and the greater emphasis being placed upon expanding livestock enterprises which

require larger capital investments. The number of loans for fiscal years 1940 and 1941, and the number of loans, amounts, and average size of loans made by states for prior fiscal years and cumulative since the inception are shown in Table VIII.

It is significant to note that in certain areas of the Nation it is necessary that larger loans be made, due to the type of agriculture. As may be seen in Figure 10, the size of rural rehabilitation loans has varied widely in these different agricultural areas.

Health services: The health program will emphasize the following points:

- a. Make borrowers aware of the importance of keeping fit.
- b. Assist borrowers in eliminating sanitary hazards, such as unprotected water supply, lack of screens, or lack of sanitary privies.
- c. Assist more borrowers to participate in medical and dental groups.

Some of the rural rehabilitation loan funds will be used for these purposes. In addition, borrowers will be urged to use their own resources to eliminate these health obstacles to wartime production.

Protection of the health of farm people is a vital wartime need. Moreover, ill health and disabilities are preventing many small farmers from working at greatest capacity. Many of these "health obstacles" can be eliminated with proper medical, dental, surgical, or hospital services.

Project 2. Rural Rehabilitation Grants:

Objective: To provide low-income farmers with the necessary means to continue production when disaster strikes them; to provide medical, health and sanitation facilities to rural families and communities which would otherwise lack them; and to provide temporary support to families who plan to become active producers on the rehabilitation program, but whose immediate needs for food, clothing, and medical care must be met before any farm operation can be successfully planned or carried out.

The Problem and its Significance: Although the need for direct rural grants has been declining, situations still arise which call for a grant program. Several distinct types of grants have been designed for meeting distinct problems. These may be classified as follows:

- a. Emergency grants: A farmer's occupation is by nature peculiarly susceptible to unforeseen disasters. To continue operating when an emergency arises will require either drawing on his savings or on outside assistance. The low-income farmers have had no opportunity to save. When faced with the effects of drought, flood, fire, crop failure or sickness, he is forced to either sell some of his meagre capital assets or to assume an overburdensome debt, unless he can obtain Government assistance.

- b. Medical and Dental Grants; Sanitary Facility Grants: The productive capacity of farm families has been greatly handicapped by conditions of poor health. Such a situation is serious not only to agricultural production, but serious in its effects upon young workers coming of age. Emergency grants will be made to permit participation in medical and dental associations which have been organized to meet some of these problems.

Sanitary Health Facility Grants are used for the construction of sanitary privies, for the protection of water supplies and for the screening of houses. They are an effective part of preventative medicine programs and have already more than paid for themselves. The sanitary measures obtained by these grants could not be obtained in any other way.

General Plan: Grants are made to farm owners, farm tenants, sharecroppers, farm laborers, and other persons who now live on farms or in farm areas, and who when last employed received the major portion of their income from farm operations. An applicant's need is established when it is determined through investigation that his material and credit resources are inadequate to meet accepted subsistence requirements, to maintain health, or to prevent human suffering.

Direct relief is administered on investigation and determination of need in individual cases. It is provided to meet emergency needs for food, fuel, clothing, shelter, medical care, sanitary facilities, and household necessities.

Employable recipients of grants are required to perform work and to execute a "Pledge of Cooperation" as a consideration of the grant. This pledge contains such conditions as will require the pledgor to raise a garden, to perform certain work on his own farm for soil improvement, land clearing, building and fence repair, improvement of sanitary facilities, weed eradication, etc.

Examples of Progress and Current Program: Since the inception of the program, over one million families had received grants by the end of the fiscal year 1942. The amount of grants totaled about \$150,000,000 over the same period. Statements of the number and amount of grants are shown in Tables IX, X, and XI.

For the 1944 fiscal year \$2,000,000 is requested for grants. This amount will be supplemented, however, through the use of the funds available under State Rural Rehabilitation Corporation trust funds. Grants will be used for the alleviation of destitution resulting from catastrophes and disasters such as droughts, floods, or damage by insects. In view of the seriousness of the food situation ahead, it is imperative that funds be available with which to cope with any type of emergency condition which may arise. A part of this estimate may be utilized for providing for health or sanitary facilities where such assistance is vital to the food production program. It is not contemplated that any portion of these funds will be available for balancing of farm and home plans.

Project 3. Rural Rehabilitation Services:

Objective: To take all possible steps to assure that: (a) no productive farm becomes idle for want of a tenant to operate it, and (b) that no operator capable of producing is idle for want of adequate resources; by developing the most efficient combination of manpower and resources through close supervision and administration of loans; by bringing about fundamental changes in agricultural production in line with the Nation's war needs as set forth in the Department of Agriculture's production goals; and by furnishing guidance to borrowers often unfamiliar with best farm practices. To service and obtain repayment of loans.

The Problem and its Significance:

a. Resources and manpower: As in industry so in agriculture the proper allocation of men and resources is of major importance. Rural rehabilitation credit by itself cannot possibly bring about the most effective results. Careful supervision is needed. This is particularly true of the small farm operator who has not been a significant factor in American Agriculture during the last twenty years. The Nation now expects him to contribute. A loan by itself is not sufficient. A careful study must be made of ways in which his labor will produce the greatest results.

Consideration must first be given as to the eligibility of each applicant for a loan. Today with universal manpower shortages this process will involve much more than in the past. Formerly a rural family did not have the alternative of finding work in town or remaining on the farm. They were forced to eke out a living where they were. Today with each applicant the question arises whether this farmer can make a significant contribution to the war by farming, or whether he should be encouraged to seek work in industry.

If it is decided that a small farm operator should continue farming with the help of a rehabilitation loan, the next decision to be made is whether the farm now being operated is adapted to the most effective use of the family's labor if equipment or livestock is added. If not, can additional adjoining land be leased so that a sound reorganization can take place; or should another farm which is being vacated be found and the farm operator and his family moved to it?

Close cooperation with other agencies of the Department of Agriculture are necessary for proper decisions of this nature to be reached. A thorough knowledge of the county should be had by the county supervisor. And a closely integrated program between counties within states and even across state boundaries must be maintained.

- b. Shifting production to vital war commodities: The Department of Agriculture has established production goals to be attained next year. These goals will necessitate certain shifts in types of farm enterprise. By its policy of supervised credit the rural rehabilitation program can help to implement these shifts.

Loans can be made with the understanding that specified enterprises will be expanded, even at the price, where necessary, of sacrificing the production of less vitally needed products. A year's labor which is spent on producing non-essential commodities where it could have been used to produce goods of higher priority is a year's labor inefficiently expended.

But the small operator, particularly in the southern states, will not of himself and without encouragement and definite planning always make such shifts. Without prodding some will follow a pattern they and their forebears have followed for generations. The supervision of the rural rehabilitation loan has shown itself tremendously effective in bringing about desirable changes.

- c. Advice on farm management practices: To bring about the most rapid changes in the type of enterprise and in the expansion of operation of the small farmer requires continuous advice on the part of local supervisors who maintain close contact with him. The possibilities of increased production through the teaching of modern farm practices are tremendous. Increased yields is a goal of equal importance to mere physical expansion. Proper selection of breeding stocks, proper feeding, proper crop rotation, efficient use of fertilizer, animal and plant disease control, effective group use of transportation, machinery and marketing facilities—all these are continuously being taught rural rehabilitation borrowers both by individual contacts and in group meetings.

Examples of Progress and Current Program: Examples of progress and current program are set forth and tied in with the project "Rural Rehabilitation Loans," as the success of the loan program is based largely upon the efforts of the supervision and servicing staffs. In 1943, funds for supervision and services were curtailed so that the number of personnel in the county offices was reduced from 4,368 farm management and 2,701 home management supervisors in 1942, to 3,136 and 2,247, respectively, for 1943. Caseloads per supervisor, which had been reduced from 205 in 1940 to 185 in 1941, and 178 in 1942, will probably rise to nearly 250 in 1943.

The amount of \$26,960,297 is being requested for this project for the fiscal year 1944. This estimate represents a decrease of \$1,399,104 below the funds available during the fiscal year 1943. This will permit the retention of a field supervisory staff of approximately 3,125 farm management and 2,132 home management supervisors to handle the caseload contemplated for 1944. With this field staff, the caseload per supervisor will

probably reach above 250. This means that this field staff must confine its activities to only the more important phases of the program in order to obtain the desired increase in food production.

Project 4. Tenure Improvement, and Farm Debt Adjustment:

Objective: To remove another obstacle to maximum production, namely, insecurity of tenure, is the primary aim of the Tenure Improvement and Farm Debt Adjustment Program.

The Problem and its Significance: It was found at an early stage that inadequate arrangements between landlord and tenant endangered any program of improvement of farm practices. Uncertainty about tenure relationships now prevents many of the Nation's 3,000,000 tenants from producing at a maximum. This uncertainty manifests itself in the failure of tenants and landlords to develop sound wartime food production plans; unwillingness of tenants to make investments in soil improvements, farm building, fencing, etc., so necessary to increased food production; and the disastrous effects on production of moving from one farm to another every year or two.

Examples of Progress and Current Program: Small tenant operators have been aided in removing the "tenure instability" obstacle. 232,000 of the 273,000 tenants among the active standard rural rehabilitation borrowers have been aided in working out definite, written leases with their landlords covering points necessary to full production. An effective program in debt adjustment of rural rehabilitation borrowers has been accomplished, a total of 181,591 individual cases having been handled from the inception to June 30, 1942. The amount of the debt reductions during this period total \$107,933,692, which represents a 21.8 percent scale-down of the debts which burdened these borrowers before securing assistance. (See Table VII for distribution of these amounts by states.)

The amount of \$1,055,000 is requested to maintain the work of the County Committees on Tenure Improvement and Debt Adjustment through which the bulk of wartime tenure improvement will be developed. The following points will be stressed in 1944 in obtaining understandings between landlords and tenants:

- a. That the tenant may use the land to produce the kind and amount of food and feed crops and have garden and pasture space needed to provide the family's subsistence and carry out the production program planned.
- b. That the minimum improvements necessary to the carrying out of the family's program will be provided by the landlord; or if provided by the tenant or both, arrangements will be made to compensate the tenant for the unused value of the tenant's contribution upon termination of the lease.

- c. That the landlord gives reasonable assurance of security on the land for the duration of the tenant's war food production program, and that the tenant gives reasonable assurance of his intention to remain on the farm and carry out his planned war production program.

Project 5. Rural Rehabilitation Projects, Including Technical Services:

Objective: To continue the development and subdivision of large tracts of land, so that economic farm units can be provided for sale to low-income farm families on long-term purchase contracts.

The Problem and its Significance: Under the authority contained in the Emergency Relief Appropriation Acts from 1935 to 1938, land was purchased, developed, and subdivided and necessary farm residential and other buildings were constructed to meet the needs of future purchasers.

The major development, improvement, and construction programs have been completed, but it has been found that certain additional improvements such as cisterns, barns, pump houses, garages, drainage ditches, etc. are required in order to make it possible for the purchasers of units to operate with maximum effectiveness. Also, a further small amount of subdividing lands to provide economic, family-size farm units is necessary. As stated under the heading "Liquidation and Management of Resettlement Projects" it is planned to dispose of, through sale by June 30, 1944, at least 75 percent of the total units included under these projects. The ultimate success of these sales to clients is contingent to a large extent upon the units being in satisfactory condition at the time of sale to permit the purchaser to assume the obligation without incurring immediate additional costs.

Examples of Progress and Current Program: The progress made in liquidation of these projects is discussed fully under the heading "Liquidation and Management of Resettlement Projects." In order to attain the goal of liquidation of 75 percent of the total units by June 30, 1944, it is necessary that the additional required improvements be completed as promptly as possible. Although it is contemplated that many of the units will be sold during the fiscal year 1943, it is known that the sale of all of the units cannot be completed, which in part is due to the necessity of doing additional work before disposition is made. An increase of \$175,000 for this project is therefore requested to permit this work to be done in the 1944 fiscal year.

Project 6. Migratory Labor Camps:

No estimate is being made under this paragraph for Migratory Labor Camps.

Project 7. Water Facilities, Arid and Semiarid Areas: (This project is a merger of "Water Utilization Projects, including Technical Services", and the appropriation "Water Facilities, Arid and Semiarid Areas"):

Objective: To increase the productive capacity of the farms and ranches, and to improve the welfare of the people carrying on and associated with farming and ranching, in the arid and semiarid portions of the West, by a progressively more effective development and utilization of the limited water supplies available for agricultural use.

The Problem and its Significance: In many areas of western United States, the quantity, quality, and availability of water for irrigation, livestock, and domestic use are more frequently the primary limiting factors to agricultural development and stability than is lack of good soil. Through the years many farmers and ranchers have been forced to leave their homes because they were unable to develop available water resources so as to use their land properly. Others are today barely subsisting or are on the verge of being forced out for the same reason. Still others, more favorably situated, lack means to improve their conditions. In many localities water resources are adequate to support permanently a livestock economy, but are inadequate for a more intensified type of farming to which the land may be suited. Stock-watering facilities well distributed over the range is needed to encourage improved distribution of grazing; potable water for livestock and farmstead use is needed close to farm or ranch buildings; and supplemental water is needed to produce the feed crops required for winter and drought period feeding.

There is frequently an over-abundance of water for crop needs in the early part of the irrigation season. Additional and improved facilities for storing spring run-off water would reduce water-logging of poorly drained areas and serious erosion of steeper land which occurs because farmers try to compensate for lack of storage facilities by excessive irrigation in the spring. Such facilities would also serve to assure the maturing of crops by providing a more adequate water supply during critical periods in the latter part of the growing season and would make possible the growing of other crops for which full season irrigation is mandatory.

Throughout the arid and semiarid areas, there is need for engineering service and supervision in connection with construction and rehabilitation of small storage reservoirs, diversions, distribution systems and other facilities. In the past, many small water facilities on good sites have been improperly constructed. The improvement of such facilities is essential to their continued use. Many farmers and ranchers lack the engineering experience to recognize existing opportunities for water storage or utilization, or to develop, in an effective manner, opportunities which they have long believed held promise.

Farmers and small irrigation organizations whose water diversion and distribution systems are at times destroyed or damaged by floods need a source of assistance adapted to help them meet such emergencies.

General Plan: After investigations to determine the availability of water and rights and the kinds of facilities needed to make the best use of the land for which water supplies are available, operations are authorized in

areas outlined primarily on a watershed basis and in which the demand and opportunity for assistance are greatest.

Funds appropriated under this item are used to provide technical engineering and supervisory assistance to individual farmers or groups of farmers interested in water development and utilization and related land use problems incident to the construction and rehabilitation of small water facilities, the construction costs of which may be financed by means of loans.

Examples of Progress and Current Program: Water problems in many areas are so complicated that operations should not be initiated without careful advance over-all planning. On May 1, 1942, there were 230 areas, comprising approximately 358,128 square miles, that had been authorized for consideration under the water facilities program. Over-all planning reports have been prepared for 190,006 square miles in 126 of these areas.

Since the inception of the program in the fiscal year 1939 through June 30, 1942, a total of 4,442 loans have been made to individuals to finance the water facilities. Some of these loans to individuals were pooled for participation in group services. Forty-two loans to groups had also been made during that period. (See Table XII for distribution by states.) The total amount of all loans for water facilities through June 30, 1942, was \$2,349,143. Grants to individuals and groups during the period amounted to \$360,656. (See Table XIII for distribution by states.)

Typical situations are the difficult winter operations encountered by farmers who have to haul water for household and livestock purposes from a two to three-mile distance. Since this long hauling is virtually impossible in sub-zero weather, many farmers are unable to maintain livestock enterprises the year around. Moreover, they are unable to maintain gardens, even when the water is plentiful at the source, because of the difficulty of haulage. Small water facilities loans enable these farmers to drill individual farmstead wells that provide an adequate year-around supply, with the result that much better use is made of the farmers' time and resources in the production of food.

Wartime Needs: During the present emergency the program is being wholly focused on helping to meet war needs. It is now the primary objective of the program to help maintain the production of those irrigated crops most vital in the war effort and, where possible, to assist in expanding the production of those crops for which there is increasing need. The program has always emphasized stabilizing and making more secure the water supply of existing farm enterprises as opposed to the development of new irrigation enterprises. Continuance of such a policy, resulting in more food production, is definitely needed today.

Particular attention is therefore being given, and will be given even more vigorously in 1944, to assisting water users to attain and maintain high production levels of vital agricultural products through the stabilization of their water supplies, the rehabilitation and replacement of deteriorated

and ineffective water facilities for which there are valid water rights, emergency repair and replacement of damaged water facilities, and in solving other pressing water utilization problems.

In the effort to achieve all-out production to meet war needs, however, some attention will continue to be given to the long-run implications of whatever is undertaken, since improvements, such as this program helps to accomplish, contribute directly to permanent stabilization of a precarious agriculture in the arid and semiarid regions of scanty and highly variable precipitation in the 17 western states. Thus, the water facilities program is being directed primarily to aid the war effort in every way possible, with secondary consideration given to the needs of the post-war period.

Project No. 8. Administration:

Objective: To determine and administer those policies and plans for increased food production which will result in the maximum contribution to the war effort.

Examples of Progress and Current Program: Administration is now on an "area" basis. A development of unusual interest and significance in the administrative organization has occurred in connection with the wartime food production program. The planning, development, and control of all phases of the new program have been put on an area basis. For these administrative purposes, the country has been divided into about 140 type-of-problem areas which are distinguished from one another by certain definable characteristics, factors, and problems. In each area, the program is adapted to the particular characteristics that are to be found, and particular emphasis put on meeting the most persistent and universal problems in the area. This approach is especially useful in the wartime food program enabling concentration on the specific obstacles to war food production peculiar to each area.

The "area" approach in administration means a saving in time and money. Field workers under the direction of an area supervisor thoroughly familiar with local problems utilize their efforts doing the most important things first. Great flexibility in the use of all food production and rehabilitation techniques is allowed. The allocation of all budgeted loan, grant, supervising and servicing, and field administration funds is now being made on the basis of area problems, area needs, and area food production possibilities that are determined scientifically on the basis of all available facts in the area.

Administrative expenses represent only a small part of the total funds handled: It is interesting to note the percentage of administrative expense to the total operating funds made available to the Farm Security Administration covering prior fiscal years as well as the fiscal years 1943 and 1944. The percentages are as follows:

How the Funds Made Available to FSA Are Used a/

<u>Description</u>	<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Direct Program Items:	<u>83.8</u>	<u>80.8</u>	<u>76.3</u>	<u>78.7</u>
Loans	<u>74.3</u>	<u>73.8</u>	<u>66.3</u>	<u>77.0</u>
Grants	<u>7.4</u>	<u>5.5</u>	<u>5.0</u>	<u>1.2</u>
Development and Construction	<u>2.1</u>	<u>1.5</u>	<u>5.0</u>	<u>.5</u>
Rural Rehabilitation Services, including Committees	<u>13.0</u>	<u>15.8</u>	<u>19.8</u>	<u>17.8</u>
Administration	<u>3.2</u>	<u>3.4</u>	<u>3.9</u>	<u>3.5</u>

a/ Based on actual obligations for 1941 and 1942 and estimated obligations for 1943 and 1944. Includes all funds made available to FSA except Defense Housing.

Thus administrative expenses represent only a small part of the total funds handled by the Farm Security Administration. The largest amounts handled are for direct program purposes, such as loans and grants. Farm and home management assistance to low-income farmers (rural rehabilitation services, including committees) comprises the remainder of the amounts made available. In the type of program that is being administered, it is manifestly improper to consider these technical services as administrative, or overhead costs. The furnishing of farm and home management supervision and guidance is just as much a part of the rural rehabilitation program as is the making of loans. In no sense can the furnishing of this type of supervision and guidance be considered an administrative expense in making the loans.

Table 1
Number and Economic Status of Farm Families in the United States

State	Number of farm operators 1/	Number of operators with gross annual farm income of less than \$250	Farm operators with gross annual farm income between \$250 and \$1,000		Number of farm families needing FSA assistance, but not now on the program, estimated by county supervisors
			Number	Percent of all operators	
(1)	(2)	(3)	(4)	(5)	(6)
U. S. TOTAL	6,096,734	1,233,515	2,715,820	45.0	1,078,627
Alabama	231,740	71,802	111,246	61.5	35,007
Arizona	18,468	6,260	6,932	39.1	3,484
Arkansas	216,674	41,886	111,177	66.0	45,617
California	132,658	23,466	36,512	28.7	23,323
Colorado	51,436	10,862	16,258	32.4	9,107
Connecticut	21,163	6,187	5,870	28.6	2,130
Delaware	8,994	1,619	3,148	36.2	872
Florida	62,218	26,615	26,973	46.0	12,746
Georgia	216,033	34,100	44,551	66.7	55,931
Idaho	43,663	5,930	12,864	30.4	11,114
Illinois	213,439	28,922	58,019	27.7	24,489
Indiana	184,549	36,031	69,084	38.2	25,466
Iowa	213,318	12,829	39,973	19.1	16,369
Kansas	156,327	24,623	62,221	40.6	19,391
Kentucky	252,894	82,179	125,744	50.6	77,998
Louisiana	150,007	30,642	99,495	67.4	38,195
Maine	38,980	10,726	14,767	38.7	2,070
Maryland	42,110	9,654	13,905	33.9	2,652
Massachusetts	31,897	7,826	10,681	34.6	2,500
Michigan	187,589	39,111	73,126	40.2	19,048
Minnesota	197,351	21,411	54,090	27.8	14,181
Mississippi	291,092	71,939	194,569	67.6	53,559
Missouri	256,100	55,906	120,636	48.3	50,532
Montana	41,823	6,891	12,768	31.6	6,463
Nebraska	121,062	12,491	47,379	39.9	7,005
Nevada	3,573	746	997	29.8	184
New Hampshire	16,554	4,490	6,170	38.0	2,385
New Jersey	25,835	4,399	6,409	25.7	1,197
New Mexico	34,105	13,385	11,725	35.7	14,591
New York	153,238	26,971	45,269	30.2	16,910
North Carolina	278,276	41,688	113,507	52.4	76,204
North Dakota	73,962	6,473	25,721	35.2	8,464
Ohio	233,783	50,447	83,661	36.7	47,315
Oklahoma	179,687	39,573	89,633	50.9	40,255
Oregon	61,829	14,825	22,899	38.5	8,383
Pennsylvania	169,027	37,755	62,399	37.7	22,003
Rhode Island	3,014	501	981	33.2	507
South Carolina	137,558	24,778	83,566	61.3	26,038
South Dakota	72,454	9,363	25,423	36.0	9,533
Tennessee	247,617	65,901	145,658	59.9	68,603
Texas	418,002	86,014	212,167	51.9	75,654
Utah	25,411	4,270	9,431	37.9	4,080
Vermont	23,582	4,646	6,585	28.5	1,585
Virginia	174,885	45,277	92,127	53.6	31,650
Washington	81,686	22,470	29,196	36.9	18,421
West Virginia	93,282	34,946	53,942	55.6	24,419
Wisconsin	186,735	19,431	54,177	29.6	18,482
Wyoming	15,018	2,158	4,229	29.4	2,505

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table II
Status and Progress of Active Standard Borrowers

State (1)	Average net worth				Average net income				Total increase in net worth all active standard borrowers				Total increase in net worth all active standard borrowers			
	Year before		Rate of increase		Year before		Rate of increase		Year before		Rate of increase		Year before		Rate of increase	
	Dollars (2)	Dollars (3)	Dollars (4)	Percent (5)	Dollars (6)	Dollars (7)	Dollars (8)	Percent (9)	Dollars (10)	Dollars (11)	Dollars (12)	Dollars (13)	Dollars (14)	Dollars (15)	Dollars (16)	Dollars (17)
U. S. Total	1,242	571	371	43	665	140	295	90	154,911,819	163,566,901						
Alabama	188	393	-205	-52	135	219	216	99	-6,598,715	6,992,824						
Arizona	3,405	2,860	525	18	1,222	1,086	136	13	551,250	112,800						
Arkansas	709	407	302	74	728	319	379	109	7,718,516	9,686,182						
California	3,217	2,669	578	22	1,431	974	507	52	1,939,768	1,701,192						
Colorado	1,194	981	213	22	1,099	576	483	84	962,121	2,181,711						
Connecticut	3,163	2,913	250	9	2,282	1,017	1,265	124	75,250	380,765						
Delaware	1,131	780	351	45	1,016	184	532	110	67,011	101,612						
Florida	895	1,122	-237	-21	579	378	201	53	-2,181,627	2,101,671						
Georgia	438	335	103	31	536	272	264	97	2,902,231	7,138,728						
Idaho	3,325	2,232	1,033	45	1,457	898	559	63	4,818,915	2,607,735						
Illinois	1,445	772	673	87	1,159	655	504	77	5,660,603	4,239,144						
Indiana	1,421	975	446	46	1,018	693	335	119	4,022,028	3,021,030						
Iowa	1,877	944	933	99	1,128	609	519	95	9,273,087	5,158,311						
Kansas	905	600	305	51	975	448	557	135	3,123,021	5,740,999						
Kentucky	1,912	1,360	582	45	912	612	300	49	9,300,912	4,794,300						
Louisiana	626	526	100	19	569	356	213	60	2,001,500	4,263,195						
Maine	1,430	1,929	-169	-26	1,029	797	232	29	-1,516,101	718,968						
Maryland	1,372	1,158	204	17	1,072	719	323	13	239,700	379,525						
Massachusetts	1,811	1,626	185	11	1,819	1,072	777	72	96,200	104,040						
Michigan	2,073	1,405	670	48	1,023	690	333	48	5,744,580	2,855,112						
Minnesota	2,069	883	1,186	134	1,071	519	522	95	12,890,634	5,673,618						
Mississippi	567	443	124	28	571	328	243	74	3,119,228	6,171,171						
Missouri	1,090	612	448	70	843	436	407	93	9,372,160	8,514,140						
Montana	2,253	1,981	272	14	1,521	788	733	93	571,536	1,933,654						
Nebraska	834	513	321	63	797	367	440	106	3,207,111	4,096,310						
Nevada	4,662	3,031	1,631	54	1,313	985	328	33	655,662	131,856						
New Hampshire	1,827	1,670	157	9	1,273	912	351	35	135,648	289,984						
New Jersey	1,550	1,722	-192	-11	1,280	718	532	71	-182,976	506,996						
New Mexico	1,811	1,146	665	58	904	415	489	118	1,889,265	1,389,219						
New York	2,113	1,732	381	22	1,205	789	416	53	1,168,755	1,603,680						
North Carolina	1,201	848	353	42	974	602	372	62	5,104,027	5,378,748						
North Dakota	1,105	532	562	103	1,362	128	934	218	3,232,052	5,371,134						
Ohio	1,158	1,112	346	31	1,069	672	397	59	3,781,780	4,339,210						
Oklahoma	1,297	764	533	70	903	480	503	105	10,890,789	10,277,799						
Oregon	3,595	2,473	1,122	45	1,501	912	559	59	3,169,650	1,579,175						
Pennsylvania	1,934	1,452	482	33	1,126	822	304	37	1,815,694	1,145,168						
Rhode Island	1,629	1,812	-213	-12	1,969	314	669	51	-34,506	108,378						
South Carolina	455	457	-12	-3	486	172	172	55	-161,172	2,510,132						
South Dakota	886	279	607	218	958	367	571	148	5,396,230	5,076,190						
Tennessee	1,826	1,105	721	65	951	528	423	80	6,715,676	3,957,588						
Texas	1,514	1,054	450	42	953	470	483	103	11,581,200	12,130,488						
Utah	3,810	2,144	1,346	55	1,400	898	502	56	5,272,282	1,966,334						
Vermont	2,727	1,752	975	56	1,272	993	279	28	905,775	259,191						
Virginia	1,607	1,153	454	39	893	338	355	66	4,055,128	3,170,860						
Washington	2,522	2,326	196	8	1,319	738	581	79	582,316	1,726,151						
West Virginia	2,042	1,715	327	19	1,044	689	355	52	2,129,937	2,638,095						
Wisconsin	1,953	1,137	716	63	1,121	595	526	88	6,077,408	4,464,688						
Wyoming	2,646	1,754	892	51	1,525	815	680	80	2,894,540	2,206,600						

1/ 1911 Annual Progress Report of Active Standard Borrowers based on sample of one out of six.

Table 1/ Status and Progress of Active Standard Borrowers 1/

State	Average value of home produced goods				Gallons milk		Pounds meat		Quarts oamed	
	1941 Dollars	Year before Acceptance Dollars	Rate of increase Dollars Percent		per family		per family		per family	
					1940 Number	1941 Number	1940 Number	1941 Number	1940 Number	1941 Number
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
U. S. TOTAL	327	163	164	101	291	472	291	488	266	297
Alabama	268	106	162	153	345	409	409	456	223	237
Arizona	279	210	69	33	447	513	250	257	159	162
Arkansas	367	117	220	150	130	505	366	447	425	473
California	217	129	88	68	236	331	196	230	178	184
Colorado	264	127	137	108	420	464	373	460	219	237
Connecticut	475	253	222	88	387	378	316	402	216	233
Delaware	446	210	206	98	378	369	478	675	322	316
Florida	268	123	145	118	284	345	345	511	209	185
Georgia	353	144	209	145	309	498	444	609	218	238
Idaho	309	156	153	98	381	513	369	495	346	360
Illinois	203	141	142	101	394	399	420	522	241	221
Indiana	249	152	97	64	356	345	393	428	261	344
Iowa	253	140	113	81	367	394	422	492	317	271
Kansas	284	152	132	87	381	416	395	474	223	227
Kentucky	400	291	109	37	480	621	462	522	317	358
Louisiana	307	166	141	85	351	432	302	336	204	223
Maine	423	279	144	52	368	465	345	377	170	185
Maryland	384	261	123	47	346	349	381	634	262	273
Massachusetts	308	203	105	52	358	257	252	252	159	214
Michigan	233	136	97	71	303	293	306	311	233	255
Minnesota	255	119	136	114	355	372	409	431	234	228
Mississippi	332	169	163	96	466	562	389	272	241	254
Missouri	315	134	181	135	438	489	417	538	341	354
Montana	342	205	137	67	371	535	403	655	248	246
Nebraska	296	121	135	112	372	359	393	537	197	227
Nevada	358	139	219	158	444	490	285	531	178	280
New Hampshire	316	225	91	40	361	331	215	254	166	178
New Jersey	343	185	158	85	224	313	217	360	183	218
New Mexico	304	149	155	104	402	398	315	388	237	280
New York	355	218	137	63	373	402	290	355	209	233
North Carolina	490	309	181	59	436	574	422	655	248	294
North Dakota	385	210	175	83	385	573	447	700	171	167
Ohio	281	150	131	87	352	385	385	484	254	337
Oklahoma	404	173	231	134	414	535	335	466	170	361
Oregon	304	171	133	78	370	387	326	433	331	357
Pennsylvania	371	226	145	64	340	346	391	589	296	361
Rhode Island	269	184	85	46	200	230	195	215	116	155
South Carolina	302	131	171	131	361	419	447	564	215	211
South Dakota	276	131	145	111	390	534	375	481	118	130
Tennessee	396	245	151	62	489	717	459	634	298	365
Texas	378	165	212	128	433	545	385	457	261	275
Utah	286	178	108	61	392	520	355	430	336	401
Vermont	326	277	49	18	402	404	354	430	208	191
Virginia	350	247	103	42	434	487	442	597	305	323
Washington	299	171	128	75	326	354	312	420	323	340
West Virginia	440	315	95	30	458	606	422	517	390	476
Wisconsin	291	130	161	124	342	395	352	442	273	299
Wyoming	291	156	135	87	380	455	390	557	240	266

1/ 1941 Annual Progress Report of Active Standard Borrowers, based on a sample of one out of six active standard borrowers.

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table 1. Rural Rehabilitation Loans by States and by Fiscal Year 1/

State and Territory (1)	1936 & 1937 (2)	1938 (3)	1939 (4)	1940 (5)	1941 (6)	1942 (7)	Cumulative as of 6/30/42 (8)
U. S. TOTAL	\$151,453,595	\$ 70,191,780	\$119,007,797	\$ 97,975,884	\$123,800,304	\$124,942,614	\$687,363,974
Alabama	5,779,046	2,766,184	7,774,626	4,492,891	8,336,970	5,640,936	34,810,653
Arizona	802,633	350,334	459,119	396,517	514,587	492,171	3,015,361
Arkansas	5,943,716	3,063,810	6,994,362	5,753,120	5,996,173	5,431,681	33,182,862
California	3,844,950	1,387,135	1,740,749	1,229,088	2,085,085	1,826,571	12,113,378
Colorado	5,080,247	2,817,026	3,578,535	2,734,878	2,343,625	1,537,794	21,122,105
Connecticut	229,187	71,652	187,432	147,526	119,239	187,405	912,441
Delaware	35,971	11,468	23,350	76,678	34,351	89,556	293,594
Florida	2,478,771	1,359,046	1,776,133	935,871	1,325,005	2,631,863	10,508,509
Georgia	5,360,909	2,192,257	6,601,416	3,903,313	6,854,971	5,887,777	30,800,643
Idaho	2,069,942	1,253,187	2,318,105	2,272,408	2,240,705	2,052,715	12,207,062
Illinois	3,136,819	1,461,028	2,729,764	1,979,773	3,020,698	1,531,330	13,859,412
Indiana	2,297,792	1,563,967	2,940,844	1,658,143	2,940,786	1,352,476	12,194,008
Iowa	2,916,271	1,726,593	3,132,017	1,870,182	2,605,833	1,853,973	14,103,969
Kansas	6,077,938	2,509,069	3,232,766	2,832,356	3,714,731	3,426,148	21,793,008
Kentucky	2,133,331	742,416	1,063,181	1,978,998	2,113,982	1,765,449	9,803,357
Louisiana	4,218,739	2,667,467	3,799,446	2,545,115	5,706,993	5,655,009	24,552,769
Maine	2,205,544	1,167,719	1,727,596	2,164,154	1,442,808	1,605,254	10,313,075
Maryland	202,434	130,223	241,234	403,522	308,913	516,884	1,807,210
Massachusetts	358,412	77,831	203,589	188,903	150,926	210,484	1,190,143
Michigan	2,646,695	974,409	1,838,335	2,094,083	2,491,926	2,463,346	12,508,794
Minnesota	4,585,142	1,480,924	2,362,549	2,553,101	3,457,359	4,175,824	18,614,899
Mississippi	4,247,254	3,677,362	5,797,264	4,758,262	7,899,973	6,160,452	33,540,567
Missouri	5,383,750	3,335,905	4,665,795	3,424,441	5,975,000	3,764,054	26,548,945
Montana	2,831,942	2,265,488	4,423,230	2,559,201	1,867,090	3,488,140	17,403,091
Nebraska	5,808,256	2,796,047	3,711,772	2,613,832	2,524,443	2,917,476	20,371,826
Nevada	341,932	131,321	164,333	89,781	180,906	393,541	1,301,814
New Hampshire	596,594	182,539	273,685	324,350	214,445	414,468	2,006,051
New Jersey	786,499	248,376	273,071	432,032	258,790	409,128	2,427,896
New Mexico	2,389,410	494,061	519,462	562,332	883,988	1,248,660	6,107,913
New York	1,831,906	783,347	1,327,317	2,051,262	1,690,012	1,671,837	9,315,681
North Carolina	3,950,993	2,161,724	3,049,443	2,895,202	3,855,351	4,906,155	20,818,868
North Dakota	4,422,757	1,606,922	3,019,889	1,919,042	1,665,027	1,796,357	14,429,994
Ohio	2,658,536	1,712,409	2,752,644	1,480,793	2,667,793	1,780,408	13,152,111
Oklahoma	6,333,575	2,829,411	4,865,163	5,632,937	6,718,292	6,264,318	32,643,696
Oregon	1,457,887	1,219,689	1,467,916	1,124,863	1,209,162	1,693,152	8,172,669
Pennsylvania	1,586,293	354,965	791,770	1,437,212	1,086,442	1,635,902	6,852,584
Rhode Island	131,124	28,477	33,175	48,391	23,397	32,045	316,509
South Carolina	4,012,432	1,600,637	3,180,373	1,227,043	3,439,451	3,160,669	16,620,605
South Dakota	5,728,046	2,675,144	3,768,939	3,146,570	3,075,847	3,404,690	21,829,236
Tennessee	2,244,123	660,537	1,272,047	1,551,890	1,541,968	1,695,825	8,966,390
Texas	14,071,733	4,958,814	8,420,154	8,503,354	9,362,375	12,703,283	58,009,713
Utah	2,700,666	1,057,107	1,179,047	868,828	929,742	1,040,717	7,776,107
Vermont	599,604	96,135	245,334	393,131	229,107	451,429	2,014,740
Virginia	2,214,571	608,822	808,760	1,332,830	1,490,881	1,212,800	7,668,664
Washington	2,446,662	1,502,851	1,806,204	1,422,775	1,590,983	1,900,783	10,670,258
West Virginia	3,153,878	587,937	1,467,412	1,164,780	886,818	637,386	7,898,211
Wisconsin	4,069,449	1,286,507	2,387,718	2,043,375	2,525,362	3,086,406	15,398,817
Wyoming	2,059,234	1,544,181	3,141,118	2,262,270	1,940,949	2,854,580	13,802,332
Alaska	0	0	0	300,000	0	6,000	306,000
Hawaii	0	1,100	32,240	39,270	108,922	57,582	239,114
Puerto Rico	0	0	0	21,790	136,224	793,288	951,302
Virgin Islands	0	0	15,574	33,557	10,370	27,517	87,018

1/ Rural rehabilitation loan obligations to all individuals and groups. Corporation Trust fund loans and Tenant Purchase loans are not included.

UNITED STATES DEPARTMENT OF AGRICULTURE

FARM SECURITY ADMINISTRATION

Table IV Rural Rehabilitation Loans and Collections by Fiscal Years 1/

Fiscal year (1)	Loan Obligations (2)	Collections		Total (5)
		Principal (3)	Interest (4)	
1936	\$ 76,962,281	991,875	9,939	\$ 1,001,814
1937	74,501,314	22,089,409	923,128	23,012,537
1938	70,191,780	26,117,504	1,221,805	27,339,309
1939	119,007,797	33,209,930	736,731	33,946,661
1940	97,975,884	47,335,631	7,622,735	54,958,366
1941	123,800,304	51,220,014	11,155,901	62,375,915
1942	124,942,614	81,403,546	13,460,341	94,863,887
Total	687,381,974	262,367,909	35,130,580	297,498,489

1/ Includes loans to individuals and groups, including RP projects; does not include tenant purchase loans; does not include Corporation Trust Funds.

Table 1. Rural Rehabilitation Loans, Maturities, and Collections, Cumulative through
June 30, 1942.

State and territory	Loan obligations (1)	Matured principal (2)	Repayments			Total repayments to total loans (7)	Percentage ratios 2/	
			Repayments matured principal (3)	Repayments uncollected principal (4)	Interest repayments (5)		Matured principal repayments to matured principal (8)	Principal repayments to matured principal (9)
U. S. Total	\$687,381,974	\$115,724,178	\$247,796,856	\$14,571,053	\$35,130,580	\$237,198,169	43.5%	78.5%
Alabama	34,810,653	11,621,091	9,521,193	972,101	1,164,394	11,957,688	34.4	81.9
Arizona	3,015,361	1,455,818	1,132,622	1,132,622	176,629	1,360,504	45.1	77.8
Arkansas	33,182,862	15,155,936	12,617,873	613,039	1,539,753	14,770,665	44.5	83.3
California	12,113,378	7,758,449	5,162,169	226,298	742,794	6,131,255	50.6	66.5
Colorado	21,122,105	9,418,372	6,906,041	378,500	1,147,619	8,432,160	40.0	73.3
Connecticut	912,141	665,330	557,515	11,069	52,189	620,773	68.0	83.8
Delaware	293,594	108,260	61,787	3,386	13,351	78,524	26.7	57.1
Florida	10,506,599	5,222,764	2,646,676	76,665	370,753	3,094,094	29.4	50.7
Georgia	30,800,643	10,754,297	8,681,315	650,368	1,260,933	10,595,616	34.4	86.8
Idaho	12,207,062	5,930,635	4,923,596	168,144	700,381	5,792,291	47.5	85.0
Illinois	13,859,112	6,960,920	5,547,532	303,279	942,591	6,793,402	49.0	79.7
Indiana	12,194,008	6,204,880	4,985,353	242,642	765,022	5,991,017	49.1	80.3
Iowa	14,103,969	7,053,056	6,219,578	447,051	954,127	7,620,756	54.0	88.2
Kansas	21,793,008	9,411,599	7,272,211	533,218	1,310,488	9,115,917	41.8	77.3
Kentucky	9,803,357	5,155,226	4,429,355	196,947	585,179	5,211,481	53.2	85.9
Louisiana	24,552,769	11,881,898	8,450,155	106,613	832,712	9,389,480	38.2	71.1
Maine	10,313,075	7,408,648	4,693,086	81,919	506,267	5,181,272	53.1	66.0
Maryland	1,803,210	770,143	578,070	22,965	68,887	669,922	37.2	75.1
Massachusetts	1,190,143	834,777	602,849	27,773	68,486	699,108	58.7	72.2
Michigan	12,508,794	5,500,566	4,429,699	280,847	772,607	5,183,153	43.8	80.5
Minnesota	18,614,829	7,890,284	6,642,452	367,205	1,201,673	8,231,330	44.2	84.4
Mississippi	33,510,567	14,700,889	12,171,312	465,297	1,393,323	14,059,761	41.9	82.8
Missouri	22,548,945	11,519,857	9,349,510	890,452	1,578,721	11,808,713	44.5	80.9
Montana	17,405,091	7,779,038	5,360,073	150,462	918,453	6,428,988	36.9	68.9
Nebraska	20,371,826	8,258,971	6,279,796	401,172	1,182,354	7,863,322	38.6	76.0
Nevada	1,301,844	589,411	543,191	17,320	82,905	643,416	49.4	92.2
New Hampshire	2,006,051	951,550	644,934	15,123	122,051	782,108	39.0	67.8
New Jersey	2,417,896	1,224,589	895,678	35,456	120,778	961,912	39.8	65.8
New Mexico	6,107,913	3,133,127	2,582,666	123,910	313,539	2,990,115	49.0	81.5
New York	9,315,681	3,909,615	2,671,187	98,565	466,916	3,236,668	34.7	68.3
North Carolina	20,818,868	10,652,252	9,036,748	211,701	753,884	10,002,333	48.0	84.8
North Dakota	14,428,994	7,066,079	4,070,942	347,613	961,609	5,380,161	37.3	57.6
Ohio	13,152,111	6,431,104	4,624,192	251,043	784,895	5,660,180	43.0	72.1
Oklahoma	32,446,466	14,727,851	13,116,998	1,216,210	1,683,061	15,016,272	49.1	89.1
Oregon	6,172,669	4,253,256	3,779,706	166,866	465,667	4,412,199	54.0	88.9
Pennsylvania	6,892,584	2,089,644	1,480,305	172,808	302,898	1,956,011	28.4	70.8
Rhode Island	316,509	188,355	118,813	2,759	18,744	144,343	46.0	63.1
South Carolina	16,680,695	6,448,487	4,910,112	295,508	718,511	5,884,131	35.1	73.9
South Dakota	21,825,256	7,720,596	5,072,542	697,208	1,153,926	6,923,676	31.4	65.8
Tennessee	8,966,350	4,651,215	4,307,413	213,552	453,784	4,974,749	55.5	92.5
Texas	58,009,713	30,714,775	25,264,044	1,538,767	2,443,531	29,046,312	50.1	82.3
Utah	7,776,107	4,484,482	3,230,201	79,961	570,149	3,880,310	50.0	77.4
Vermont	2,044,740	936,667	828,635	56,860	125,202	1,040,797	50.2	89.5
Virginia	7,683,684	4,535,969	3,593,699	140,858	402,913	4,041,670	52.6	77.2
Washington	6,070,258	6,070,057	4,713,666	301,192	545,001	5,559,859	52.1	77.7
West Virginia	7,898,211	2,752,167	2,081,285	116,150	467,996	2,645,361	33.7	75.6
Wisconsin	15,396,817	6,928,875	6,204,841	641,957	1,022,247	7,869,045	51.0	89.6
Wyoming	13,802,332	5,760,160	4,446,745	205,449	806,498	5,059,610	44.0	80.7
Alaska	306,000	0	0	0	3,000	3,000	1.0	96.6
Hawaii	239,114	43,959	42,469	10,851	6,757	60,057	25.1	79.1
Puerto Rico	951,202	115,750	91,570	23,949	4,102	119,680	12.6	100.0
Virgin Islands	87,018	13,037	8,105	2,563	2,366	13,056	15.0	62.2

1/ All Rural Rehabilitation loans including loans to individuals and groups, not including Tenant Purchase loans, and not including loans from Corporation Trust funds.

2/ Ratios are derived as follows: Col. (8) = Col. (7) ÷ Col. (2); Col. (9) = Col. (4) ÷ Col. (3); Col. (10) = $\sqrt{\text{Col. (4)} \div \text{Col. (3)}}$.

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table VI
Number of Abandonments, Voluntary Liquidations, and Involuntary Liquidations
By States as of June 30, 1942

State and territory (1)	Abandonments (2)		Voluntary liquidations (3)		Involuntary liquidations other than abandonments (4)		Total (5)	
	Number		Number		Number		Number	
U. S. TOTAL	19,952		70,424		2,338		92,721	
Alabama	837		4,453		159		5,449	
Arizona	14		107		1		122	
Arkansas	852		10,775		117		11,744	
California	34		786		19		839	
Colorado	96		1,150		73		1,319	
Connecticut	1		33		1		35	
Delaware	1		17		0		18	
Florida	79		689		33		741	
Georgia	408		4,845		86		5,339	
Idaho	27		437		35		499	
Illinois	54		1,346		8		1,408	
Indiana	72		1,144		5		1,221	
Iowa	39		1,022		9		1,070	
Kansas	31		1,561		33		1,625	
Kentucky	37		749		57		843	
Louisiana	5		1,989		115		2,109	
Maine	3		393		2		398	
Maryland	4		58		4		66	
Massachusetts	0		64		1		65	
Michigan	15		1,873		392		2,280	
Minnesota	10		2,405		236		2,651	
Mississippi	1,034		8,503		123		9,660	
Missouri	261		2,885		12		3,158	
Montana	45		304		29		378	
Nebraska	13		1,674		17		1,704	
Nevada	2		17		0		19	
New Hampshire	0		126		0		126	
New Jersey	2		159		1		162	
New Mexico	56		456		40		552	
New York	4		594		5		603	
North Carolina	145		2,199		34		2,378	
North Dakota	10		778		16		804	
Ohio	75		1,335		6		1,416	
Oklahoma	3,292		802		85		4,186	
Oregon	32		454		43		529	
Pennsylvania	13		439		6		458	
Rhode Island	0		18		0		18	
South Carolina	332		2,924		25		3,351	
South Dakota	3		960		7		970	
Tennessee	31		1,399		39		1,469	
Texas	11,796		3,189		151		15,136	
Utah	7		179		3		189	
Vermont	2		55		2		59	
Virginia	63		1,528		38		1,629	
Washington	18		671		35		724	
West Virginia	42		866		37		945	
Wisconsin	23		1,735		161		1,919	
Wyoming	26		226		21		273	
Alaska	0		0		0		0	
Lumail	0		0		0		0	
Puerto Rico	0		0		0		0	
Virgin Islands	6		3		16		25	

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table VII Debt Adjustment Activities Among Low-Income Farmers From Isolation Through June 30, 1942

State (1)	Individual Cases Adjusted			Indebtedness Prior to Adjustment (5)	Amount of Debt Reduction (6)	Ratio of Debt Reduction to Prior Indebtedness (7)	Taxes Paid (8)
	By Debt Reduction (2)	By Other Methods (3)	Total (4)				
U. S. TOTAL	104,951	76,640	181,591	\$500,844,718	\$107,933,692	21.8	\$5,666,128
Alabama	6,572	2,034	8,606	6,463,668	1,488,969	23.0	24,826
Arizona	201	815	1,016	2,202,287	168,805	7.7	26,025
Arkansas	5,006	4,017	9,023	10,811,947	2,598,124	24.0	173,775
California	583	2,017	2,600	16,065,821	2,002,615	12.5	92,697
Colorado	2,779	557	3,336	6,901,771	1,925,549	27.9	88,316
Connecticut	186	392	578	4,663,631	535,810	11.5	56,839
Delaware	132	149	281	856,234	189,723	22.2	3,815
Florida	1,261	1,498	2,759	5,513,555	555,447	15.5	121,902
Georgia	2,803	2,635	5,438	6,870,467	1,086,731	15.8	90,741
Idaho	1,187	1,348	2,535	9,214,286	1,870,705	20.3	104,580
Illinois	2,356	2,134	4,490	18,602,125	4,528,100	24.3	124,938
Indiana	1,875	3,027	4,902	11,477,136	1,468,002	12.8	89,986
Iowa	4,767	2,892	7,659	47,035,317	8,819,863	18.8	308,183
Kansas	4,400	2,160	6,560	20,639,642	6,018,586	29.2	194,228
Kentucky	1,109	1,042	2,151	6,444,611	1,144,828	17.8	29,542
Louisiana	2,960	4,876	7,836	9,130,399	2,341,546	25.6	121,334
Maine	1,255	721	1,976	9,856,733	1,947,397	19.8	62,049
Maryland	534	498	1,032	5,945,499	1,840,907	22.4	49,324
Massachusetts	173	661	834	5,852,083	441,240	7.5	79,806
Michigan	1,603	523	2,126	4,422,611	904,906	20.5	47,192
Minnesota	3,241	931	4,172	14,568,825	3,886,187	26.7	130,723
Mississippi	4,387	2,885	7,272	8,544,223	1,312,172	15.4	122,837
Missouri	4,429	3,529	7,958	13,916,953	2,969,379	21.3	33,564
Montana	1,591	403	1,994	5,266,656	1,284,195	24.4	79,893
Nebraska	4,356	3,937	8,293	25,988,005	6,531,717	25.1	297,177
Nevada	56	37	93	609,247	113,802	18.7	8,327
New Hampshire	141	131	272	1,041,737	142,087	13.6	15,562
New Jersey	164	491	655	4,100,947	601,807	14.7	48,621
New Mexico	1,760	431	2,191	3,297,294	792,918	24.0	33,424
New York	1,009	1,645	2,654	13,352,686	2,015,647	15.1	86,881
North Carolina	2,605	1,488	4,093	5,945,488	1,140,181	19.2	110,520
North Dakota	3,071	777	3,848	20,740,642	4,748,440	22.9	383,428
Ohio	2,201	4,120	6,321	11,256,559	1,336,446	11.9	92,346
Oklahoma	6,393	2,008	8,401	20,040,834	3,862,696	19.3	305,972
Oregon	692	851	1,543	7,238,009	1,078,901	14.9	107,350
Pennsylvania	1,225	1,323	2,548	10,687,325	1,612,112	15.1	175,234
Rhode Island	24	94	118	620,010	10,685	1.7	3,480
South Carolina	2,269	1,194	3,463	3,130,742	599,202	19.1	48,517
South Dakota	6,755	1,525	8,280	26,986,888	11,477,567	42.5	634,614
Tennessee	813	1,557	2,370	4,624,457	458,714	9.9	80,087
Texas	7,958	8,411	16,369	42,336,830	8,349,668	19.7	610,438
Utah	593	684	1,277	5,448,496	670,364	12.3	79,878
Vermont	346	135	481	2,425,256	508,511	21.0	24,032
Virginia	916	1,060	1,976	4,802,700	1,171,799	24.4	27,829
Washington	1,436	1,099	2,535	11,261,474	2,938,088	26.1	52,567
West Virginia	777	990	1,767	4,971,549	969,992	19.5	68,976
Wisconsin	2,405	470	2,875	10,650,889	3,408,561	32.0	79,551
Wyoming	1,596	438	2,034	8,420,174	2,363,961	28.1	74,202

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table *VIII* Rural Rehabilitation Loans to Individuals 1/

State and territory (1)	Fiscal Year 1940		Fiscal Year 1941		Fiscal Year 1942				Cumulative since inception as of June 30, 1942			
	Original loans		Original loans		Original loans		Supplemental loans		Original loans		Supplemental loans	
	Number		Number		Number		Average amount		Number		Average amount	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
U. S. TOTAL	81,250	217,472	85,737	263,753	82,165	\$602	288,495	\$234	922,206	\$398	1,538,439	\$189
Alabama	1,750	20,519	6,393	40,044	2,802	471	26,849	156	51,608	261	137,187	140
Arizona	175	413	164	539	192	959	623	468	2,610	572	3,125	425
Arkansas	3,920	16,188	5,609	15,991	4,099	529	21,066	152	61,643	253	119,826	114
California	489	1,372	840	1,881	1,016	802	1,791	531	8,880	829	11,786	411
Colorado	948	4,126	679	3,790	2,078	651	5,055	403	23,472	415	30,642	332
Connecticut	32	101	12	92	68	802	100	1,029	546	880	531	895
Delaware	79	107	49	48	93	600	90	375	344	602	286	322
Florida	517	3,717	969	6,333	884	356	5,403	166	14,156	284	30,111	180
Georgia	3,216	15,459	3,891	29,436	3,875	489	19,156	196	48,535	291	110,381	140
Idaho	855	2,443	945	2,648	1,232	898	2,439	349	7,971	903	12,018	392
Illinois	1,724	2,247	1,371	1,741	976	690	3,140	273	14,847	594	13,940	253
Indiana	1,589	1,589	1,395	1,449	827	651	2,484	318	13,007	607	10,554	265
Iowa	1,609	1,631	1,326	2,022	733	947	3,521	329	17,345	564	13,702	262
Kansas	2,093	8,003	1,644	8,251	2,874	557	8,429	214	31,614	387	51,803	183
Kentucky	7,920	3,358	7,525	5,536	2,945	314	4,099	205	31,791	205	19,541	166
Louisiana	1,962	9,390	5,027	10,885	2,957	463	18,928	224	35,234	275	68,403	197
Maine	437	2,418	232	1,793	1,87	624	1,579	820	4,749	646	11,764	626
Maryland	372	295	217	423	426	672	474	465	1,700	687	1,437	397
Massachusetts	75	170	46	140	262	432	155	644	1,178	604	933	566
Michigan	1,890	1,117	1,890	1,731	2,057	792	2,325	359	13,925	690	8,058	360
Minnesota	3,958	1,682	2,017	1,675	3,073	1,051	2,621	330	19,090	787	12,070	280
Mississippi	3,241	16,853	6,238	17,432	2,327	516	25,098	195	51,634	271	117,220	148
Missouri	4,008	5,305	3,607	3,804	3,775	449	8,098	220	41,539	405	45,952	159
Montana	629	2,034	736	1,798	1,831	884	3,800	410	11,696	725	16,067	490
Nebraska	3,009	8,455	1,649	8,966	3,834	469	8,804	119	26,049	481	51,951	141
Nevada	40	97	68	150	63	976	150	511	744	929	790	24
New Hampshire	107	348	59	276	229	880	375	564	1,778	607	1,863	477
New Jersey	177	356	70	383	284	716	338	579	1,605	779	1,802	523
New Mexico	320	1,226	529	1,758	1,057	495	2,896	243	12,111	277	13,420	208
New York	988	1,622	433	1,118	1,076	892	1,833	388	6,718	819	6,913	422
North Carolina	3,833	6,332	3,721	9,065	2,746	439	10,698	314	29,305	300	44,636	224
North Dakota	2,308	3,556	1,064	1,856	2,873	422	2,618	187	41,028	224	44,660	147
Ohio	1,353	2,039	1,513	2,263	1,429	639	3,230	266	15,517	562	14,037	246
Oklahoma	3,897	15,344	4,039	14,893	3,282	795	18,938	190	40,303	425	94,339	160
Oregon	582	1,309	466	1,213	1,291	816	1,489	418	6,390	817	7,447	385
Pennsylvania	1,294	1,430	609	1,147	1,203	876	1,552	356	6,309	695	5,337	335
Rhode Island	16	30	4	19	54	591	29	694	306	733	192	595
South Carolina	1,215	5,475	3,020	15,182	1,369	535	11,201	216	22,244	289	61,092	164
South Dakota	2,222	4,895	1,473	3,471	3,049	706	5,769	192	42,846	339	53,421	161
Tennessee	4,407	4,422	3,036	6,069	1,306	366	6,224	149	18,631	234	27,184	111
Texas	3,749	27,083	4,553	23,048	4,746	644	31,508	259	71,195	349	188,181	172
Utah	652	2,275	534	2,317	380	127	1,911	279	8,463	515	13,199	267
Vermont	170	590	100	371	229	113	576	335	1,566	927	2,194	294
Virginia	2,179	2,726	1,905	4,006	936	398	2,706	222	13,581	329	17,541	171
Washington	512	1,057	589	1,147	1,452	837	1,177	573	7,864	839	6,330	663
West Virginia	1,970	1,226	1,306	1,657	947	370	1,365	210	10,510	363	6,831	216
Wisconsin	1,886	2,419	1,419	1,533	2,031	1,144	1,456	386	16,605	717	11,149	278
Wyoming	608	2,534	492	2,117	943	1,232	3,443	486	7,260	1,012	15,341	427
Alaska	0	0	0	0	3	2,000	0	0	3	2,000	0	0
Hawaii	28	25	59	77	53	594	29	900	179	797	132	735
Puerto Rico	5	43	166	0	3,386	168	791	275	3,557	198	834	285
Virgin Islands	235	21	39	169	25	98	66	38	423	126	256	44

1/ Standard and non-standard loans to individuals. Loans from corporation trust funds not included.

Table LX Number of Grants to Individuals by States

State and territory	1940 Fiscal Year		1941 Fiscal Year		1942 Fiscal Year		Cumulative through June 30, 1942
	(1)	(2)	(3)	Number	(4)	Number	
U. S. TOTAL		981,846	471,302		299,781		6,894,128
Alabama		102,397	44,130		13,919		191,845
Arizona		19,835	22,921		12,903		66,683
Arkansas		9,194	6,212		16,360		125,724
California		109,706	34,178		41,630		243,433
Colorado		28,225	16,988		4,693		138,735
Connecticut		31	16		8		412
Delaware		181	111		53		701
Florida		50,449	2,456		1,963		75,624
Georgia		49,048	14,887		22,118		146,453
Idaho		4,830	6,431		2,905		36,184
Illinois		4,505	6,677		3,507		81,124
Indiana		1,742	2,319		1,000		11,878
Iowa		891	1,779		907		42,831
Kansas		48,887	19,539		2,120		455,689
Kentucky		3,885	3,175		2,779		123,880
Louisiana		5,909	7,990		10,866		43,689
Maine		1,450	1,596		1,493		7,066
Maryland		1,163	1,350		793		4,154
Massachusetts		128	117		55		1,159
Michigan		3,828	4,589		3,689		39,197
Minnesota		11,367	11,395		6,006		158,156
Mississippi		55,087	12,811		11,111		126,347
Missouri		18,102	19,871		11,167		398,126
Montana		44,722	20,333		5,336		266,339
Nebraska		42,964	36,533		3,655		472,197
Nevada		146	154		68		704
New Hampshire		294	379		212		1,886
New Jersey		909	517		227		4,484
New Mexico		39,789	11,802		6,068		93,212
New York		2,993	2,776		1,711		17,253
North Carolina		6,128	4,934		4,828		46,136
North Dakota		39,237	10,908		712		1,007,100
Ohio		3,556	4,212		2,025		44,309
Oklahoma		28,585	11,134		5,203		370,540
Oregon		3,802	4,170		6,460		27,805
Pennsylvania		3,366	4,261		2,890		15,721
Rhode Island		85	42		14		746
South Carolina		11,717	8,941		49,212		113,486
South Dakota		141,692	57,292		3,174		1,862,845
Tennessee		4,357	1,548		1,237		23,598
Texas		36,672	22,665		15,279		234,894
Utah		5,081	2,757		1,265		3
Vermont		266	248		228		2,177
Virginia		2,578	1,820		1,235		8,963
Washington		11,133	6,049		4,253		56,226
West Virginia		1,874	1,453		589		22,162
Wisconsin		11,293	10,020		4,448		210,000
Wyoming		6,798	4,965		1,502		46,845
Hawaii		0	2		1		25,861
Puerto Rico		0	0		5,714		5,714
Virgin Islands		180	419		160		832

Table I Rural Rehabilitation Grant Payments $\sqrt{}$

State and territory (1)	Fiscal Year 1940 (2)	Fiscal Year 1941 (3)	Fiscal Year 1942 (4)	Cumulative from inception through June 30, 1942 (5)
U. S. TOTAL	24,119,857	17,209,582	13,271,583	150,722,060
Alabama	2,607,326	1,998,217	733,124	6,280,847
Arizona	845,719	780,835	382,178	2,121,895
Arkansas	512,930	232,769	625,914	2,450,420
California	3,359,651	2,866,258	2,232,395	11,518,745
Colorado	615,117	1,044,965	1,144,774	2,672,966
Connecticut	1,294	549	584	13,365
Delaware	6,254	3,057	4,352	22,528
Florida	861,069	133,085	236,855	1,660,764
Georgia	1,115,289	742,671	1,078,150	3,917,995
Idaho	177,064	218,848	95,843	897,696
Illinois	102,820	157,503	90,478	1,520,228
Indiana	37,364	59,489	38,553	331,951
Iowa	33,619	48,754	32,637	826,447
Kansas	796,605	364,508	73,979	7,626,989
Kentucky	289,545	269,661	239,399	2,411,182
Louisiana	198,386	269,698	641,261	1,410,754
Maine	16,726	61,352	60,916	228,993
Maryland	28,954	33,343	37,136	122,793
Massachusetts	4,197	3,607	2,801	36,522
Michigan	90,202	156,240	207,441	974,381
Minnesota	210,029	293,348	276,541	3,052,186
Mississippi	1,217,727	646,990	516,759	3,023,216
Missouri	475,944	744,726	376,820	6,471,648
Montana	1,099,098	527,265	167,892	6,143,195
Nebraska	656,223	885,378	116,379	8,504,100
Nevada	4,948	6,824	11,072	30,848
New Hampshire	10,435	12,726	10,524	65,862
New Jersey	25,785	15,620	13,621	134,019
New Mexico	832,033	452,996	266,588	2,065,841
New York	89,827	80,282	81,812	521,150
North Carolina	446,197	377,096	300,458	1,545,565
North Dakota	680,864	217,873	24,805	20,896,889
Ohio	85,390	112,723	93,168	987,227
Oklahoma	889,070	331,790	200,440	5,910,241
Oregon	127,458	154,526	448,998	1,089,648
Pennsylvania	98,360	117,498	115,217	466,607
Rhode Island	2,347	1,171	791	23,080
South Carolina	227,359	417,152	1,227,502	2,709,200
South Dakota	2,441,693	944,925	85,832	23,174,428
Tennessee	236,545	98,405	81,843	632,974
Texas	1,210,886	936,232	971,596	5,797,819
Utah	136,715	106,944	75,742	705,573
Vermont	12,748	17,215	20,456	85,371
Virginia	224,845	121,426	82,288	542,787
Washington	347,725	221,811	130,809	1,539,604
West Virginia	126,900	138,571	44,668	632,904
Wisconsin	230,072	270,928	210,947	4,370,525
Wyoming	181,058	125,061	57,174	1,175,960
Virgin Islands	5,535	12,407	9,325	29,386
East		260	80	340
Alaska	0	0	0	0
Puerto Rico			344,368	344,368

$\sqrt{}$ All grant obligations to individuals and groups, except grants made from corporation trust funds and grants for water conservation under the Appropriation "Development of Water Facilities".

Table **XI** Families Receiving Grants from Inception of
Program by States Through June 30, 1942

Families Receiving Grants from Inception of Program Through June 30, 1942				Families Receiving Grants from Inception of Program Through June 30, 1942			
State (1)	Borrowers (2)	Grant only (3)	Total (4)	State (1)	Borrowers (2)	Grant only (3)	Total (4)
<u>U. S. TOTAL</u>							
Alabama	30,624	36,717	67,341	Nevada	152	45	197
Arizona	836	26,023	26,859	New Hampshire	351	42	393
Arkansas	24,942	264	25,206	New Jersey	607	158	765
California	3,924	57,953	61,877	New Mexico	6,714	2,928	9,642
Colorado	9,501	5,287	14,788	New York	1,878	907	2,785
Connecticut	84	55	139	North Carolina	11,332	4,379	15,711
Delaware	95	23	118	North Dakota	33,037	19,556	52,593
Florida	9,742	17,853	27,595	Ohio	7,370	4,682	12,052
Georgia	26,817	20,389	47,206	Oklahoma	26,867	47,608	74,475
Idaho	2,972	30,772	33,744	Oregon	2,009	25,983	27,992
Illinois	7,305	10,585	17,890	Pennsylvania	2,582	444	3,026
Indiana	3,298	1,253	4,551	Rhode Island	79	94	173
Iowa	5,250	5,375	10,625	South Carolina	13,322	28,844	42,166
Kansas	14,429	15,745	30,174	South Dakota	35,238	20,045	55,283
Kentucky	10,297	19,364	29,661	Tennessee	7,029	1,125	8,154
Louisiana	14,748	1,457	16,205	Texas	38,838	20,272	59,110
Maine	1,128	130	1,258	Utah	3,360	2,186	5,546
Maryland	699	253	952	Vermont	379	166	545
Massachusetts	188	142	330	Virginia	3,066	80	3,146
Michigan	4,489	2,515	7,004	Washington	3,519	54,486	58,005
Minnesota	12,799	9,236	22,035	West Virginia	4,238	1,395	5,633
Mississippi	24,932	1,628	26,560	Wisconsin	17,466	30,297	47,763
Missouri	33,345	52,142	85,487	Wyoming	3,493	2,441	5,934
Montana	5,743	15,234	20,977				
Nebraska	12,712	17,896	30,610	Hawaii	3	0	3
				Puerto Rico	3,010	4,971	7,981
				Virgin Islands	296	0	296

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Table A¹ Number of Water Facilities Loans Cumulative as of June 30, 1942

State (1)	Number of loans to individuals <u>1/</u> (2)	Number of groups receiving loans (3)	State (1)	Number of loans to individuals <u>1/</u> (2)	Number of groups receiving loans (3)
U. S. TOTAL	<u>4,422</u>	<u>44</u>			
Arizona	67	1	Oklahoma	504	0
California	173	0	Oregon	235	3
Colorado	148	11	South Dakota	130	0
Idaho	346	14	Texas	1,157	0
Kansas	195	0	Utah	372	8
Montana	75	2	Washington	187	1
Nebraska	136	0	Wyoming	459	1
Nevada	33	0			
New Mexico	117	3			
North Dakota	88	0			

1/ Some of these loans to individuals were pooled for participation in group services. 302 loans under the appropriation for "Water facilities in arid and semiarid areas" are included.

UNITED STATES DEPARTMENT OF AGRICULTURE
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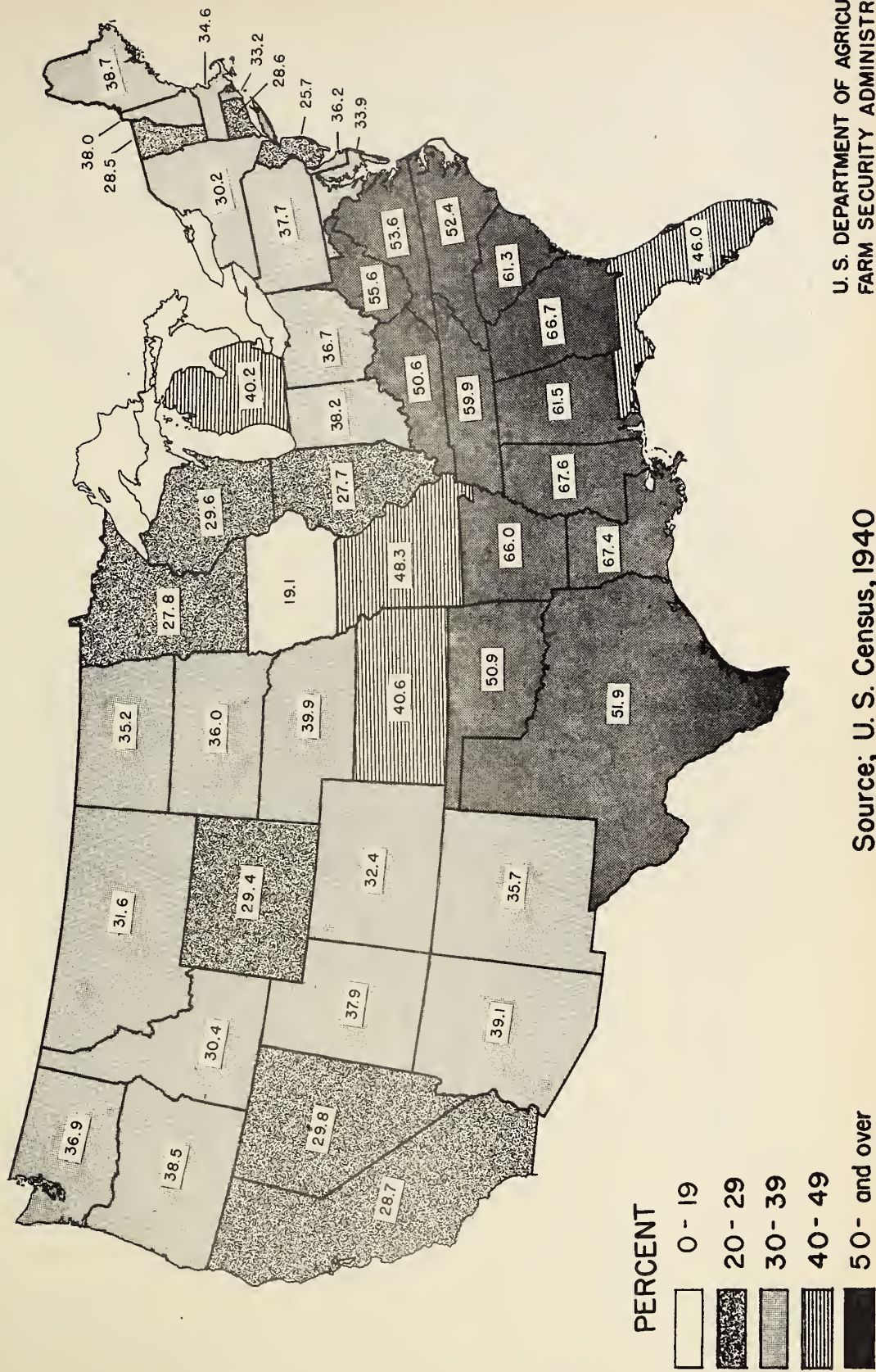
Table ~~VI~~ Water Facilities Loans and Grants Cumulative as of June 30, 1942

State (1)	Loans <u>1/</u> (2)	Grants <u>2/</u> (3)	State (1)	Loans <u>1/</u> (2)	Grants <u>2/</u> (3)
U. S. TOTAL	<u>\$2,349,143</u>	<u>\$360,656</u>			
Arizona	52,155	4,607	Oklahoma	\$151,012	\$22,456
California	143,089	1,093	Oregon	187,954	1,184
Colorado	144,646	35,524	South Dakota	32,171	0
Idaho	322,522	33,953	Texas	397,483	42,551
Kansas	67,176	3,692	Utah	183,574	14,120
Montana	61,745	4,815	Washington	119,489	3,878
Nebraska	108,099	1,109	Wyoming	262,397	72,868
Nevada	20,310	13,886			
New Mexico	64,866	104,190			
North Dakota	30,455	730			

1/ Expenditures including \$253,793 from "Water facilities in arid and semiarid areas".

2/ Expenditures including \$49,285 from "Water facilities in arid and semiarid areas".

FIG. 1 PERCENT OF FARMS IN EACH STATE WITH TOTAL FARM PRODUCTS VALUED AT BETWEEN \$250 AND \$1000 IN 1939.



Source; U. S. Census, 1940

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FIG. 2 INCREASE IN GROSS INCOME OF FSA BORROWERS
COMPARED WITH THAT FOR ALL FARMERS, 1939 - 41

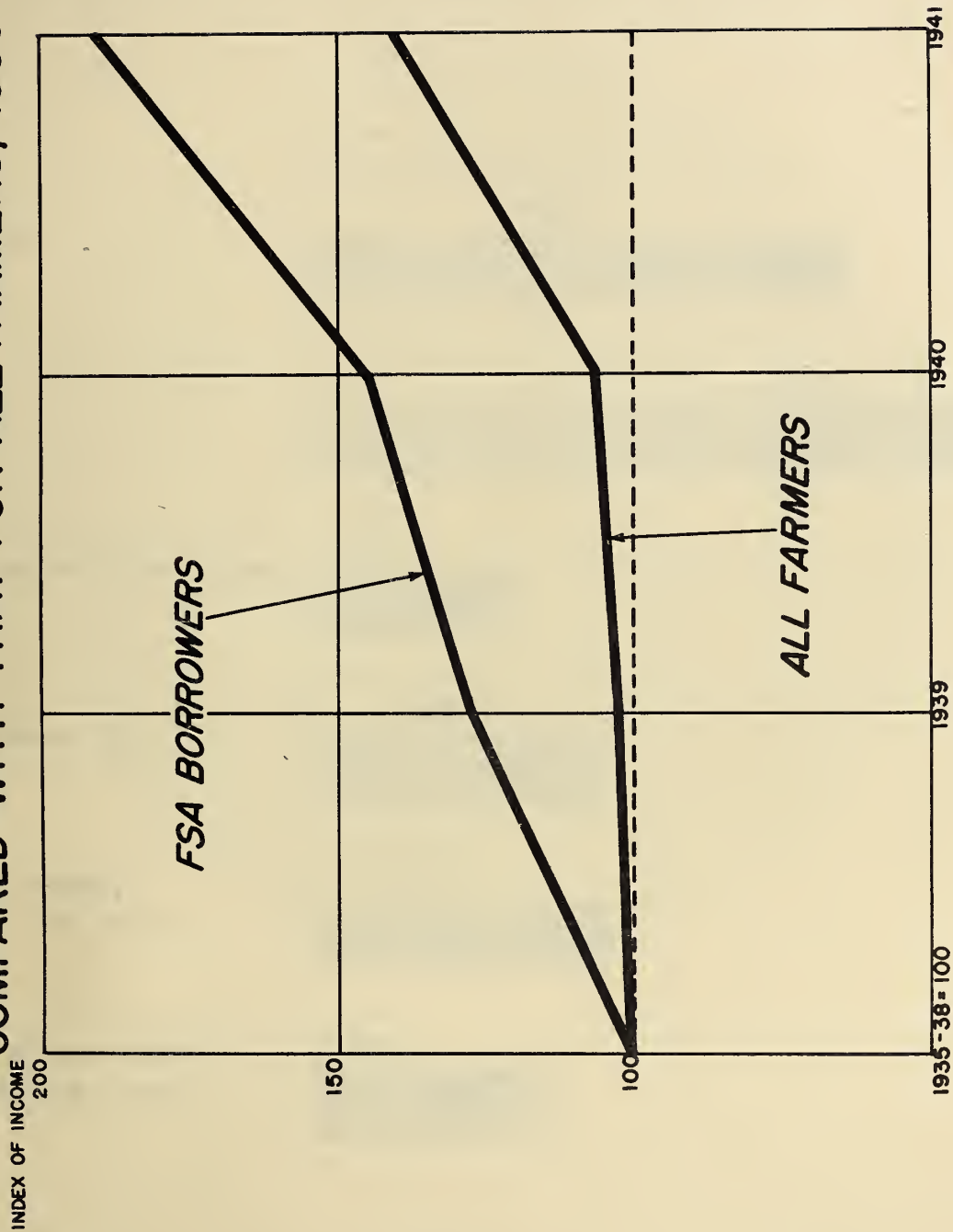
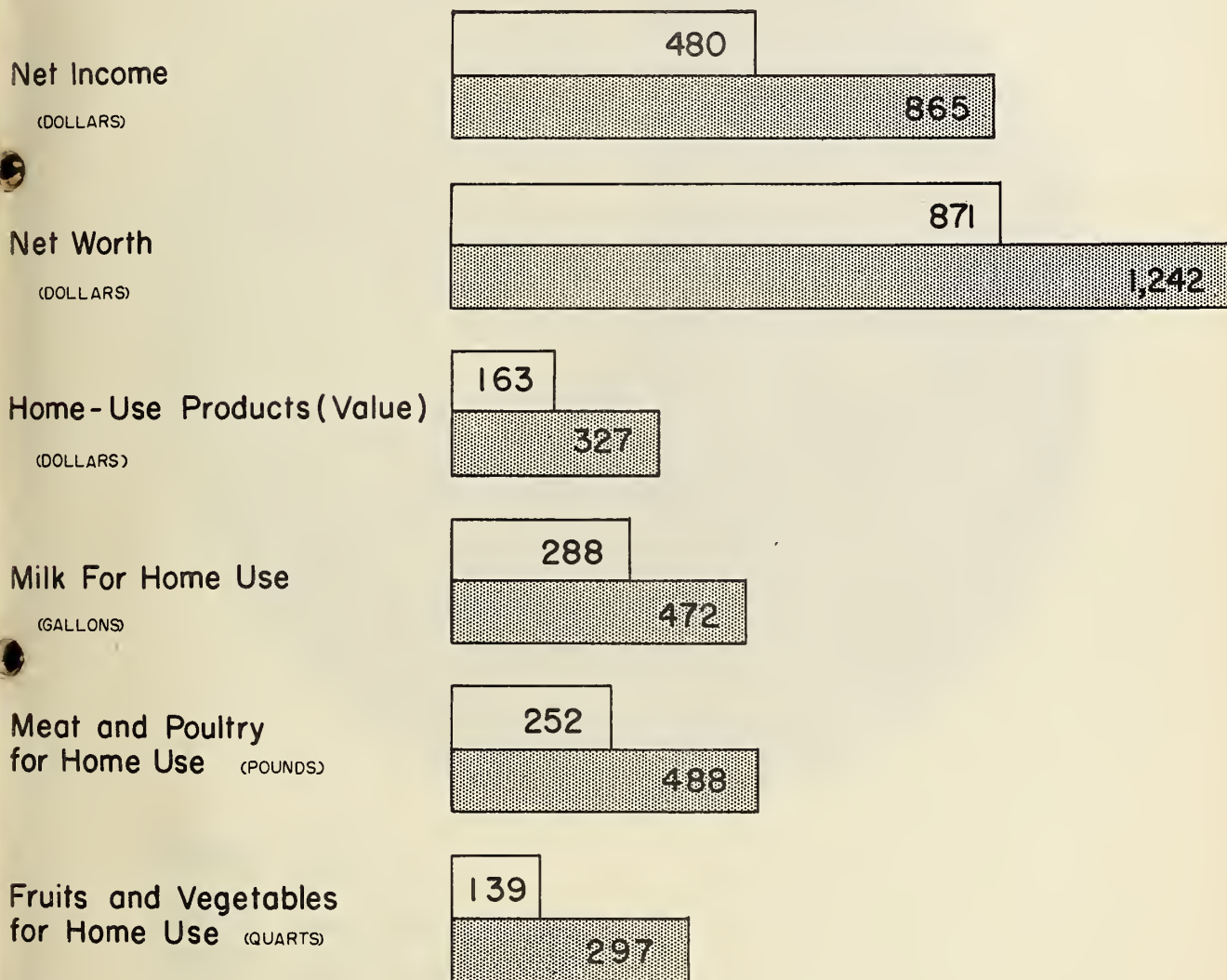


FIG. 3 PROGRESS OF BORROWERS ON THE RURAL REHABILITATION PROGRAM IN 1941.



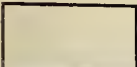

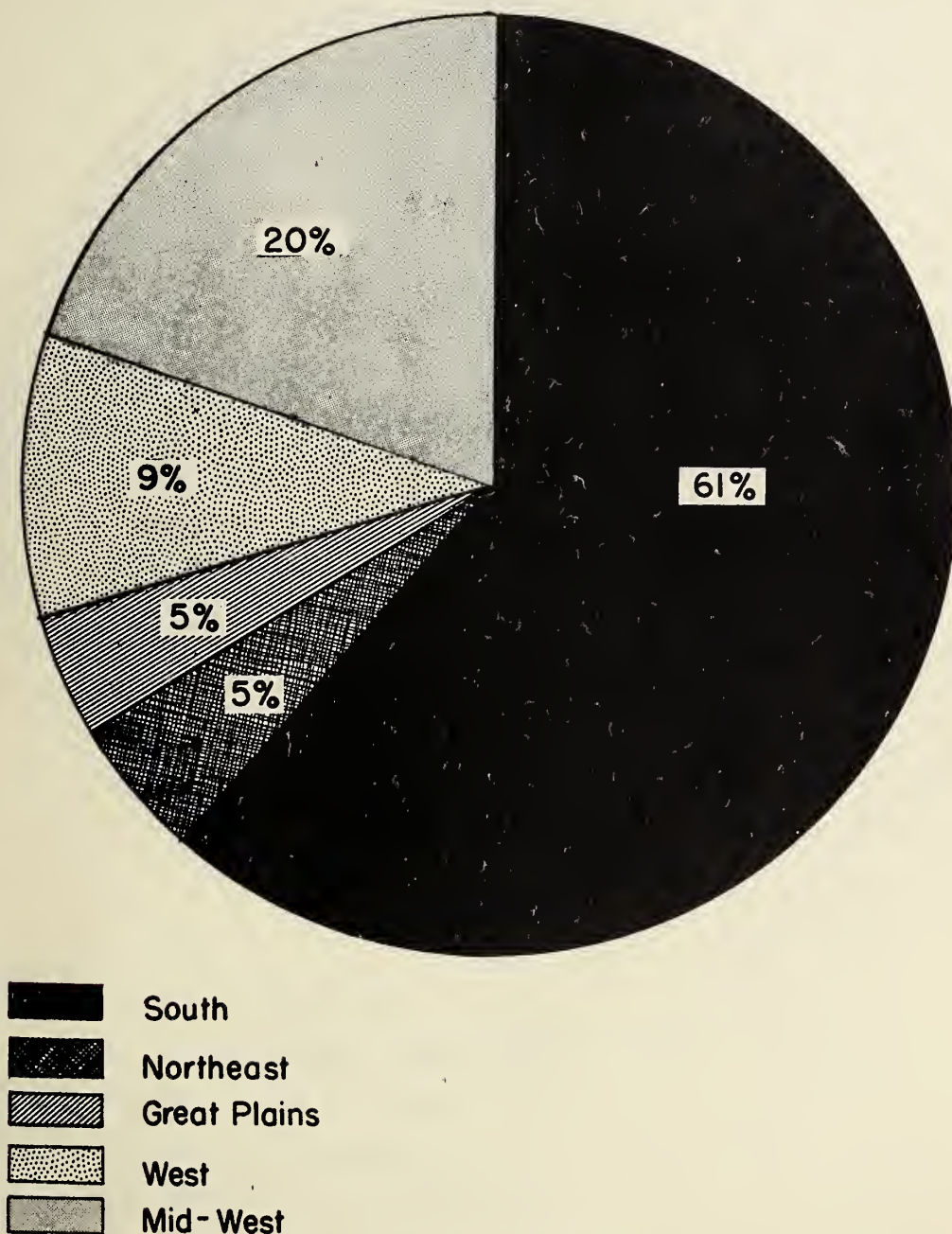
 Year Before Coming on FSA Program
 1941

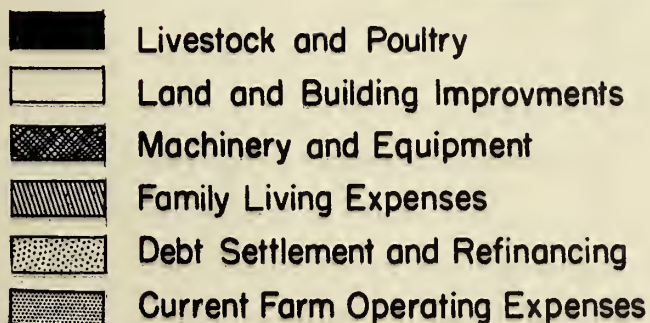
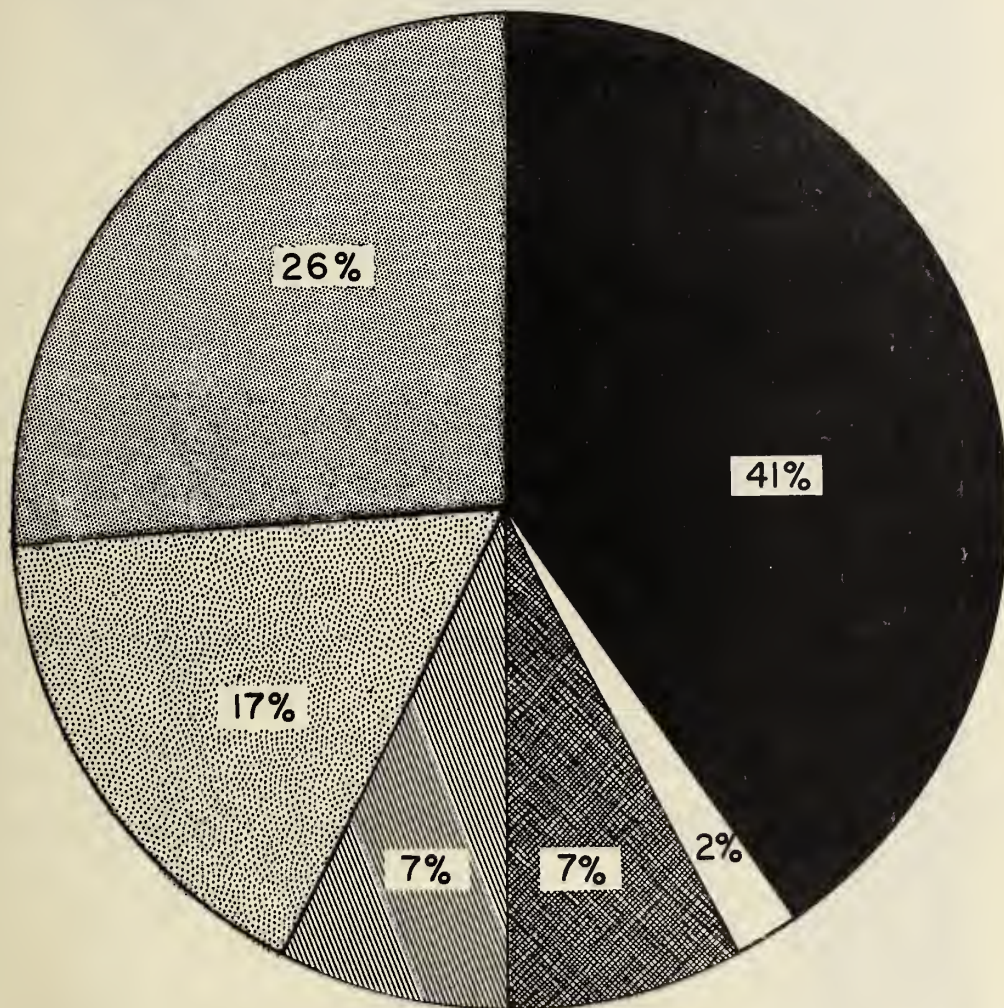
FIG. 4 PERCENT OF NEEDY FARM FAMILIES LOCATED IN EACH MAJOR AREA, AS REPORTED BY FSA SUPERVISORS, AS OF JANUARY 1, 1942.*



* Source: 1941 Annual RR Family Progress Report. A total of 1,079, 000 farm families was reported as known personally by FSA supervisors to be in need of FSA assistance.

FIG. 5 HOW THE REHABILITATION LOAN DOLLAR IS SPENT.

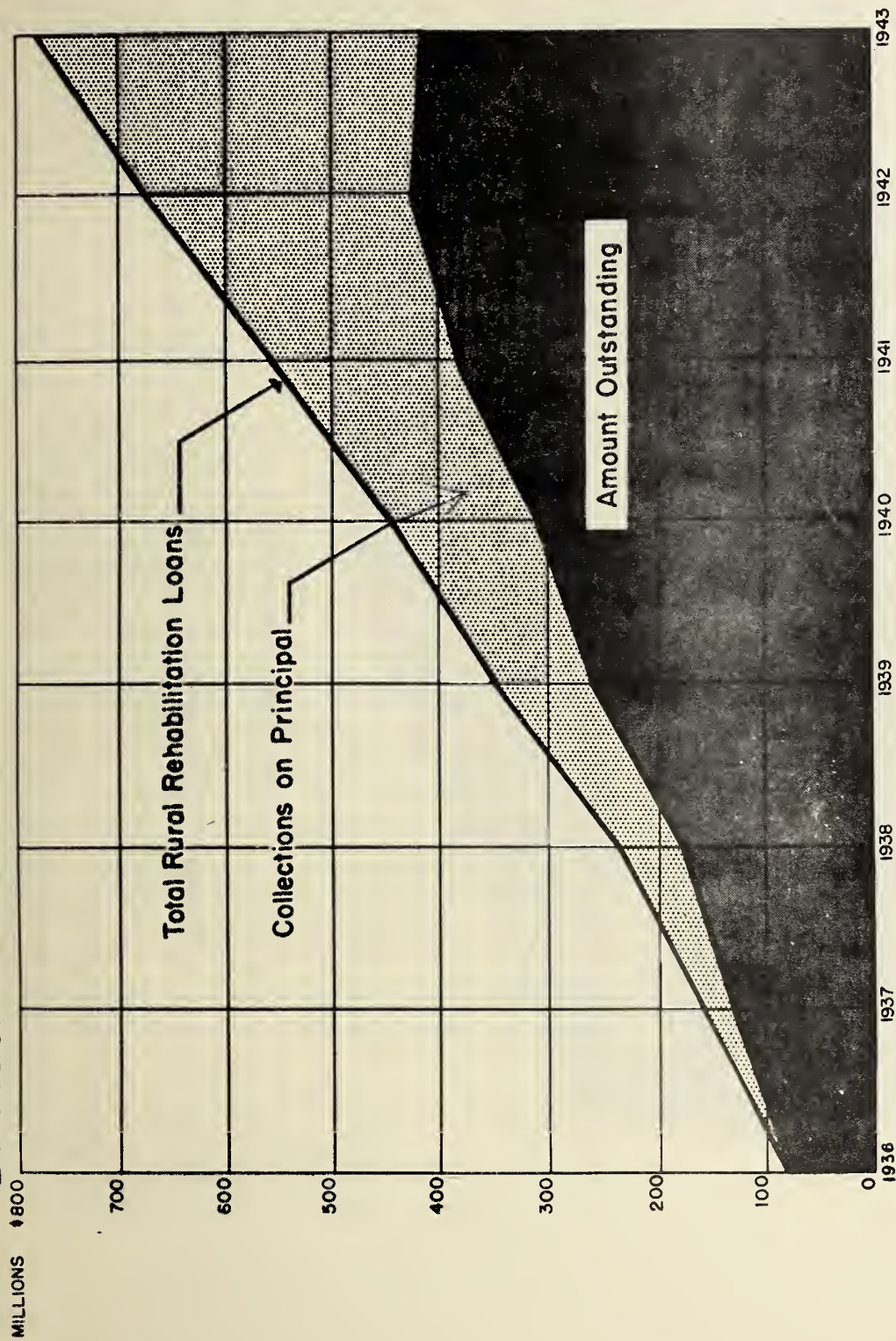
Percent of Average Original Standard RR Loan
Spent for Different Purposes. *



*Based on a study by the Bureau of Agricultural Economics of loans
made during the 1936-39 lending periods.

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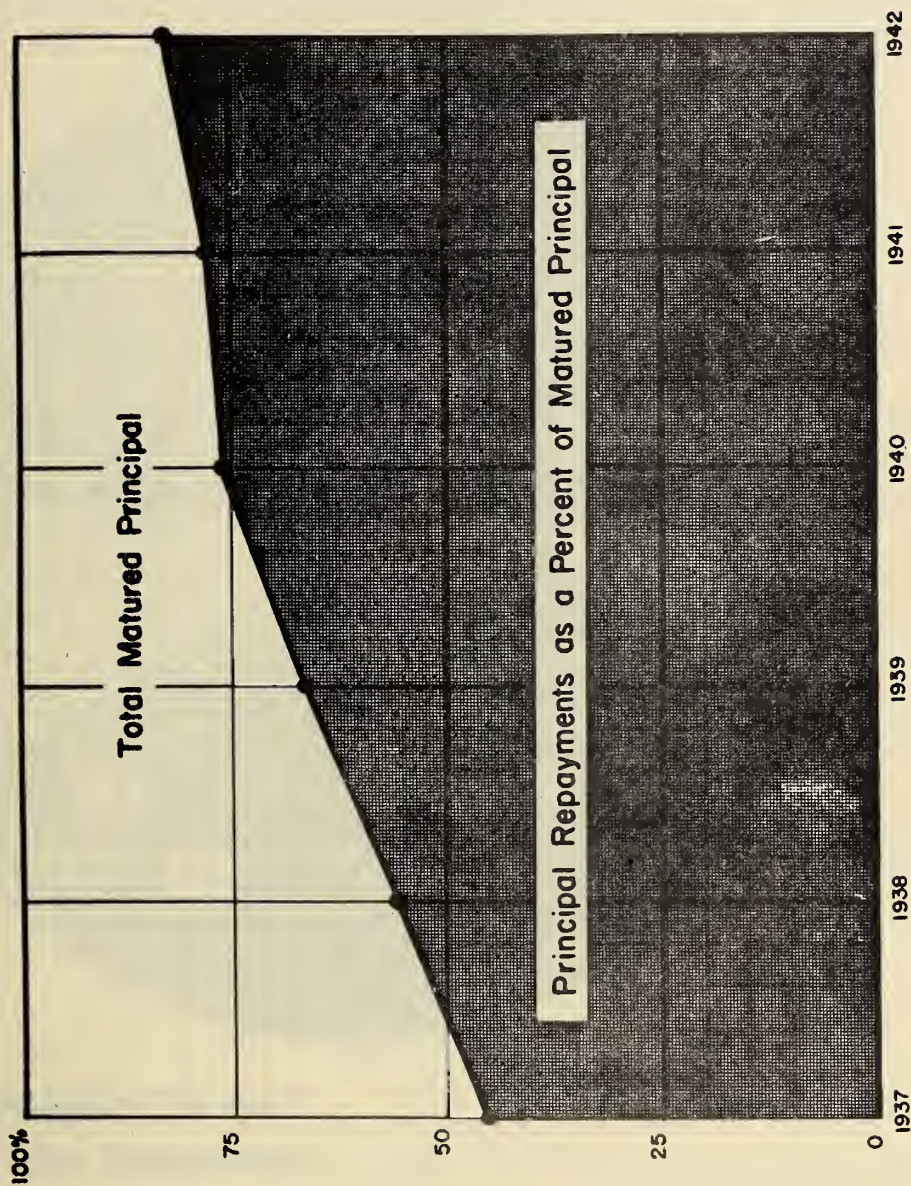
**FIG. 13 RURAL REHABILITATION LOANS AND COLLECTIONS
BY FISCAL YEARS**

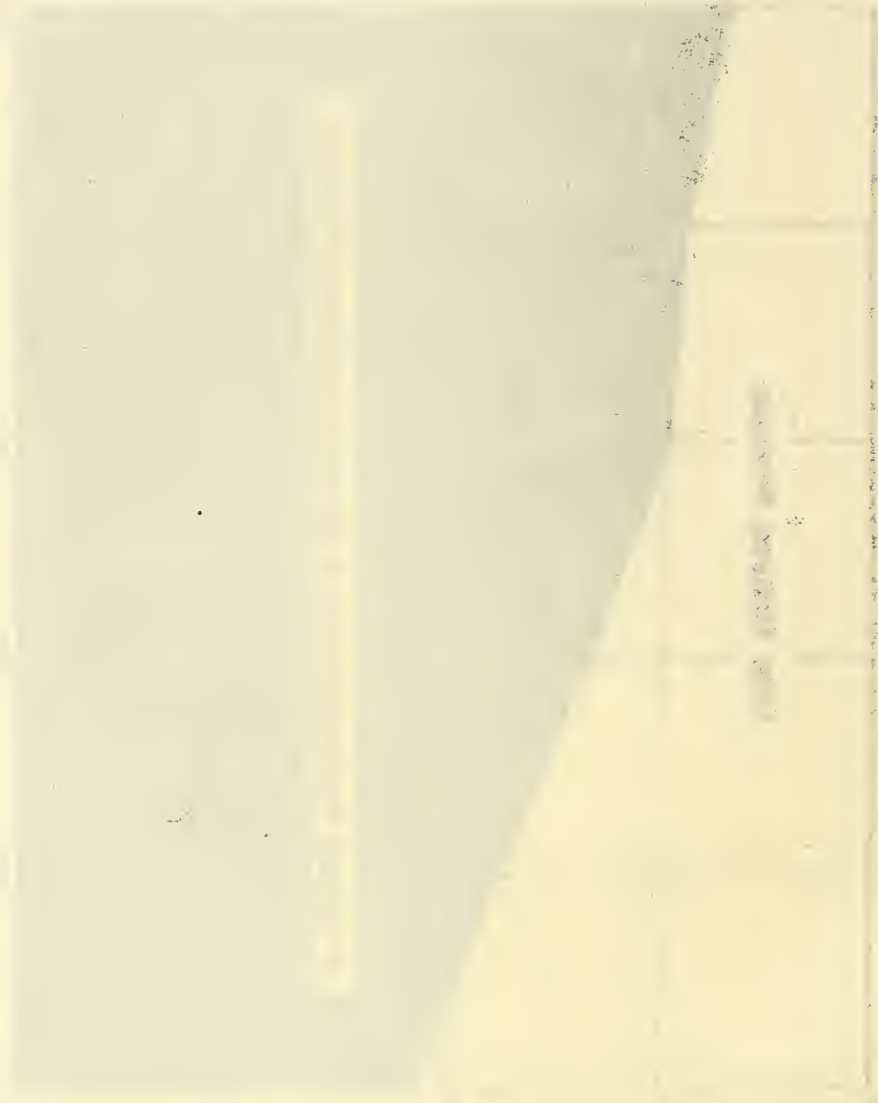


Note: In addition to the \$262,367,911 that had been collected on principal as of June 30, 1942, a total of \$35,130,580 had been collected as interest. The interest collections are not shown in this graph. Figures used in this graph do not include corporation trust funds.

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FIG. 7 PRINCIPAL REPAYMENTS ON RURAL REHABILITATION
LOANS AS A PERCENT OF MATURED PRINCIPAL BY
FISCAL YEARS.





Rate of change

Time

FIG. 8 SERVICES MADE AVAILABLE TO FARMERS BY FSA COOPERATIVE GROUPS, SHOWN AS PERCENTAGE IN EACH TYPE, AS OF JUNE 30, 1942

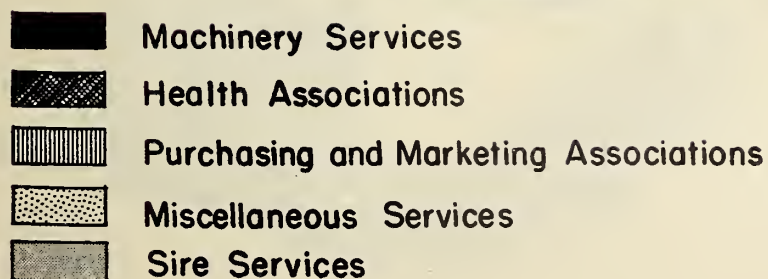
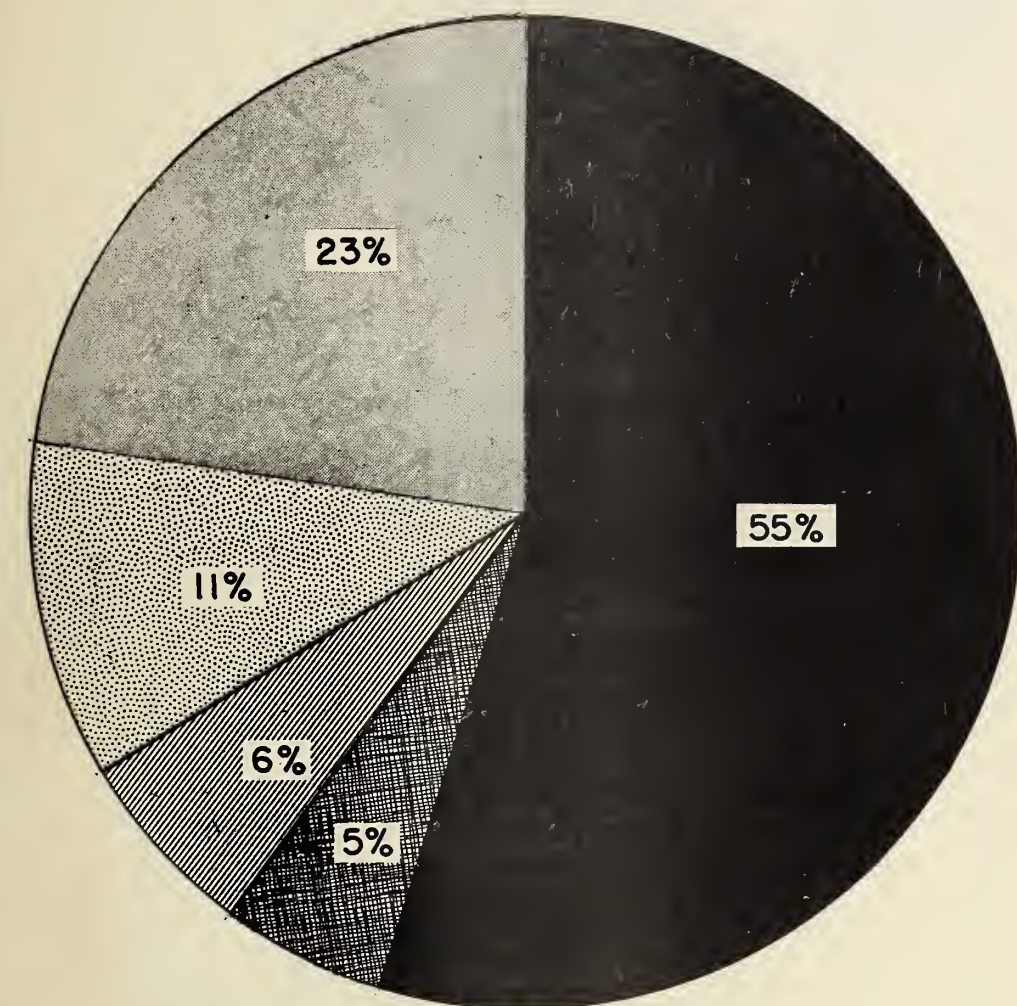


FIG. 9 NUMBER OF FS, COMMUNITY GROUPS AND COOPERATIVE SERVICES AND ASSOCIATIONS, AS OF JUNE 30, 1942

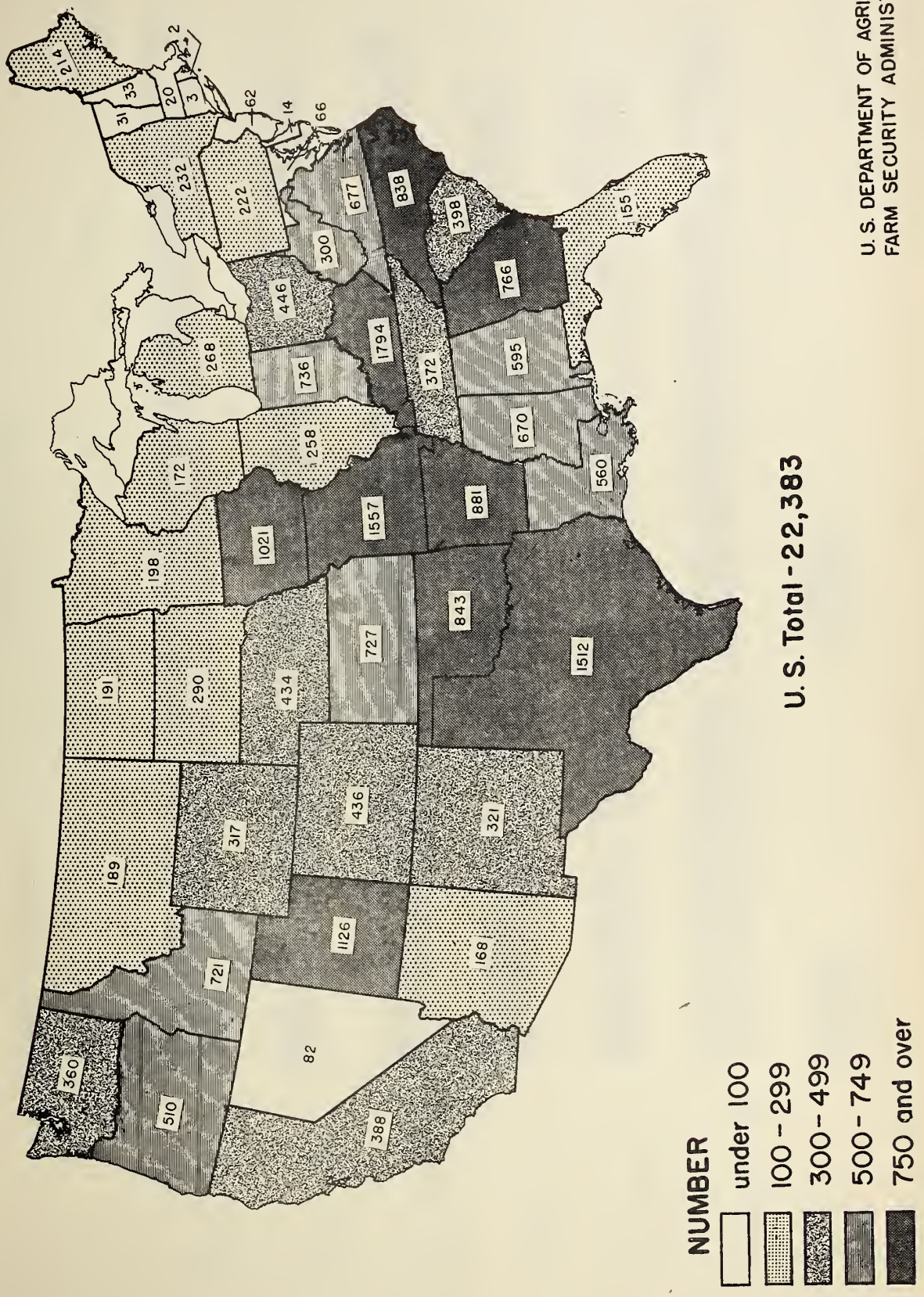
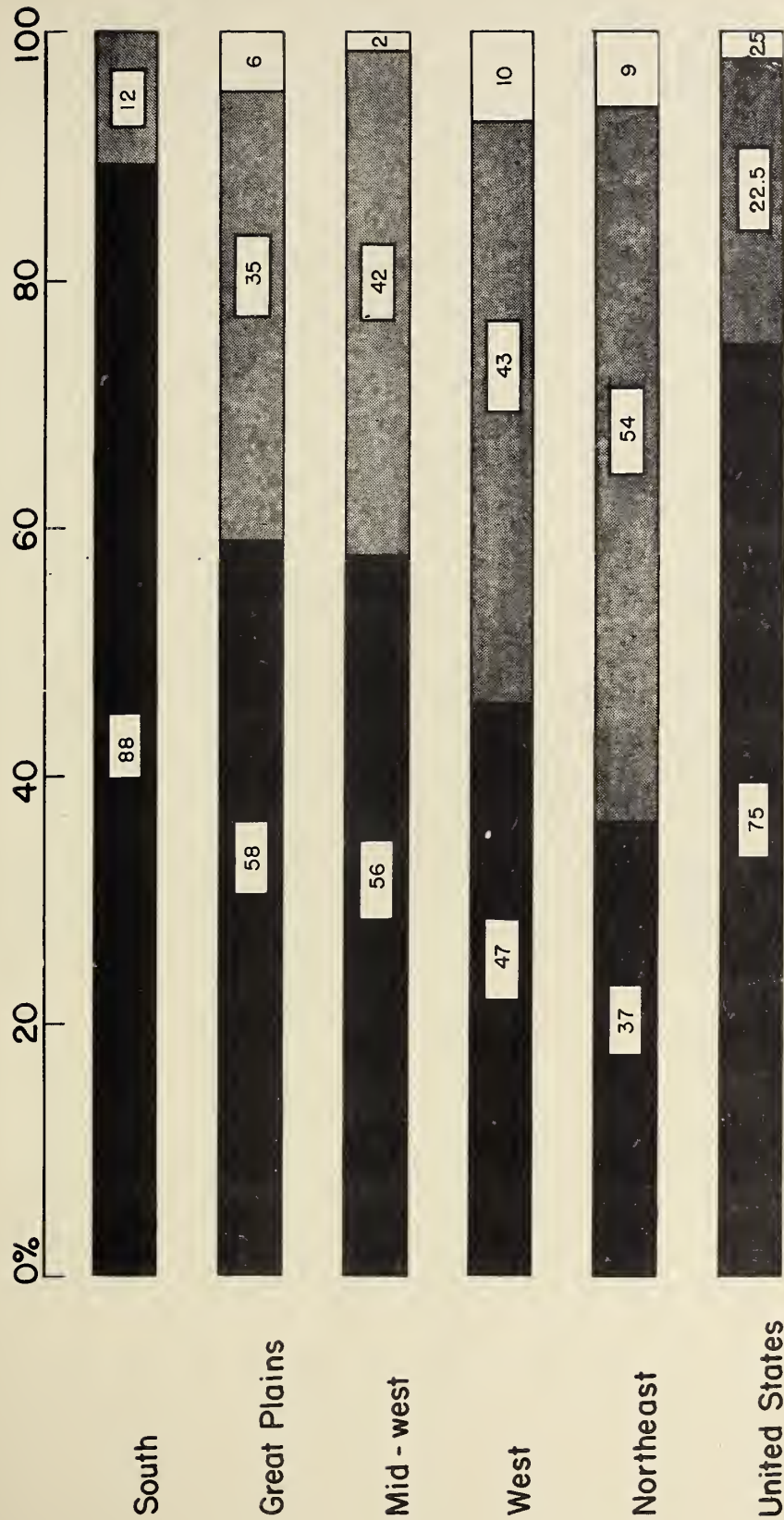


FIG. 10

PERCENTAGE OF REHABILITATION LOANS IN DIFFERENT SIZE GROUPS, BY AREAS

Shown for Original Standard Loans Made in 1942



under \$1000

\$1000- 2500

over \$2500

(b) EMERGENCY FUND FOR THE PRESIDENT
NATIONAL DEFENSE, (ALLOTMENT TO AGRICULTURE) (FSA)

The first part of the Budget schedule accounts for the allotment from the "Emergency Fund for the President" for making, servicing and collecting loans made in connection with the evacuation of enemy aliens, which function the Farm Security Administration was asked to assume by the War Department.

The second part of the Budget schedule accounts for the allotments to the Farm Security Administration of \$500,000 on July 29, 1942 and \$1,000,000 on October 2, 1942 from the Appropriation "Emergency Fund for the President, National Defense." These allotments were made to provide an adequate supply and distribution of farm laborers for the production of agricultural products essential to the War program by effecting transportation of farm labor, including aliens within the continental United States and elsewhere, from areas of excess supply to areas of greatest need. No expenditures were made from these funds in 1942 fiscal year and none are estimated therefrom for the fiscal year 1944.

(c) WORKING FUND, AGRICULTURE, FARM SECURITY ADMINISTRATION

The Budget schedule accounts for the advance of funds from "Contingent Fund, Chief of Staff, Army" for loans in connection with evacuation of enemy aliens (for the same purposes described under (b) above).

(d) EMERGENCY FUND FOR THE PRESIDENT, NATIONAL
DEFENSE, FARM SECURITY ADMINISTRATION

The Budget schedule covers the allotment made to cover the payment of travel and special per diem allowance in connection with the decentralization of employees of the Farm Security Administration from the District of Columbia to Cincinnati, Ohio.

(e) FARM TENANCY - TITLE I

Appropriated funds:

Appropriation Act, 1943	\$1,625,000
Proposed transfers in the 1944 estimates to	
other appropriations (see Budget schedule for details) .	<u>-153,140</u>
Total available, 1943	1,471,860
Budget estimate, 1944	<u>1,326,070</u>
Decrease (including decrease of \$40,790	
travel funds returned to surplus)	<u>-145,790</u>

- Loan Funds Under Title I -

Limitation on borrowings from R.F.C. for loans:

Limitation, 1943	32,500,000
Limitation, Budget estimate, 1944	30,000,000
Decrease in loan funds, 1944	<u>-2,500,000</u>

Net total funds available:

1943	33,971,860
Estimate, 1944	<u>31,326,070</u>
Decrease, 1944 (including decrease of \$40,790 travel funds returned to surplus)	<u>-2,645,790</u>

PROJECT STATEMENT

Project	1942	1943 :(estimated):	1944 :(estimated):	Increase or decrease
				(1)
1. Farm tenancy loans	\$47,978,274:	\$32,500,000:	\$30,000,000:	-\$2,500,000
2. Technical services, including state and county committees	1,640,266:	870,177:	837,255:	-32,922
3. Administrative expenses	831,544:	558,547:	486,469:	(3) -72,078
Covered into Treasury in accordance with Public Law 674	- -:	40,790:	- -:	-40,790
Continuing transfers to other Departments (see budget schedule for details)	- -:	2,346:	2,346:	- -
Unobligated balance	10,824:	- -:	- -:	- -
Total available	50,460,908:	33,971,860:	31,326,070:	-2,645,790
Transfers in the estimates to other appropriations (see Budget sched- ule for details)	+254,450:	+153,140:	- -:	
Net estimated appropriation, re- appropriation and R.F.C. loan funds 1944 and comparable amounts, 1943 and 1942	50,715,358:	34,125,000:	31,326,070:	
1941 funds reappropriated for obli- gation in 1942	-248,172:	- -:	- -:	
Unobligated loan authorization	+2,021,726:	- -:	- -:	
Total appropriation, and loan authorization	52,488,912:	34,125,000:	31,326,070:	

DECREASE

The decrease of \$2,645,790 in this item for 1944 consists of \$40,790 decrease in travel funds (returned to surplus in 1943) and:

- (1) A decrease of \$2,500,000 under the project "Farm tenancy loans" representing an estimated reduction of approximately 2,100 loans to be made during 1944 fiscal year.
- (2) A decrease of \$32,922 under the project "Technical services, including state and county committees." This reduction results from the decrease in number of loans to be made in 1944 fiscal year.
- (3) A decrease of \$72,078 under the project "Administrative expenses." This reduction results from the reduction in the loan program.

WORK UNDER THIS APPROPRIATION

Objective: The unprecedented demand upon the Nation's agriculture resulting from the war has brought into sharp focus the need for farms of a size which can give full employment to the available family labor, but which are not so large as to be dependent on hired labor for full production. Our agriculture is characterized at present by far too few family-type farms of adequate size. Some farms are too large to make an efficient contribution to the war effort in a period of labor and equipment shortages. Others are too small to give maximum utilization of family labor. The farm ownership program is aimed at bringing together the capacities of the families and the capacities of the farms in a manner which will make them permanent and fully productive parts of our agricultural economy.

The Problem and its Significance: In general, it is the owner-operated, family-type farm that is able to make the greatest contribution to the war effort. The reasons for this are simple: The owner-operated family-type farm (1) tends to utilize the maximum amount of the farm family's time, combining it with the maximum proportions of capital that can be efficiently handled; (2) does not require additional farm labor that is so scarce during this war emergency; and (3) brings to the enterprise the maximum security of tenure and the greatest incentive to produce in abundance. The latter point is particularly important in obtaining dairy, livestock, and poultry products, which are some of our most critical food needs. All over the country there are local labor shortages on larger-than-family-type farms, and all over the country there are thousands of man-hours of labor wasted on smaller-than-family-type farms with inadequate resources and equipment. The right balance, the proper utilization of labor available and the maximum incentive to produce are all characteristics of the family-type farm established by the farm ownership program. This is the deep-rooted, traditional American way of farming.

Inadequate farm units: Of the 6,097,000 farms listed in the U. S. Census of 1940, only about 2,000,000 produced more than \$1,000 in gross value of products per farm in 1939. Indeed, the gross value of products of less than \$250 per farm produced on 1,233,000 units was so low as to almost preclude them from being considered as farms at all. The following table classifies the Nation's farms according to the value of their farm production in 1939 as shown by the 1940 Census:

Gross Value of Products Per Farm	:	Number of: Farms	:	Total Value of Products	:	Average Value: Products Per: Farm	:	Percent of Total Number of: Farms	:	Value of Products
\$0 - 250	:	250	:	\$1,233,000	:	\$159,330,000	:	\$129	:	20.2 : 2.0
250 - 600	:	600	:	1,692,000	:	690,980,000	:	408	:	27.8 : 8.8
600 - 1,000	:	1,000	:	1,054,000	:	817,140,000	:	775	:	17.3 : 10.5
1,000 - 1,500	:	1,500	:	709,000	:	866,290,000	:	1,222	:	11.6 : 11.1
1,500 - 10,000	:	10,000	:	1,311,000	:	3,939,350,000	:	3,005	:	21.5 : 50.4
10,000 - Over	:	Over	:	58,000	:	1,340,560,000	:	23,113	:	1.0 : 17.2
Unclassified	:		:	40,000	:		:		:	.6 :
U. S. Total	:		:	6,097,000	:	7,813,650,000	:	1,282	:	100.0 : 100.0
	:		:		:		:		:	

A tremendous amount of valuable manpower is being wasted on many of the nearly 3,500,000 farms producing between \$250 and \$1,500 worth of products each year. Labor is not fully utilized and standards of living are low on these units. Approximately 1,700,000 of them are so inadequate as to have produced an average total value of farm output of only \$400 in 1939. This volume of output is obviously not enough to maintain a farm family or a farm. Another million or more farms in 1939 yielded an average of only \$750 per farm. Clearly this, too, is a grossly inadequate farm-family income.

On close scrutiny, then, the farm picture shows a vast amount of resource inadequacy, with not much more than one-third of the Nation's farmers operating adequate farm units. Surely food production suffers under such conditions. Surely, too, family living standards will continue to suffer unless positive steps are taken to overhaul the economic base underneath the families living on the land. Recent farm prosperity has not resulted in proportionate increases for all income classes in the farm population. The farm families in the upper third of the income brackets received about 67 percent of the increase in farmers' gross consumer income that occurred between 1941 and 1942.

Loss of Production on uneconomic units: The waste of vital manpower is only one of the serious aspects of the present organization of the Nation's agriculture. Another is the direct loss in potential food and fibre production on the Nation's farms as a result of the uneconomic distribution and organization of farm resources and facilities. Two factors contribute most to this loss of potential production. One is the inadequacy of land and capital and inability to produce much for the markets without adequate farm and home management guidance and assistance. The other factor is lack of a satisfactory relationship to the land that is being farmed; insecure tenancy and poor farming practices have been linked together for many generations in all parts of the United States.

Establishing tenant farmers on family-type farms of their own is based on a very logical economic premise, namely, that tenants operating inadequate units under insecure tenure arrangements are not only failing to produce to the extent to which they are capable, but also are failing to sustain themselves on an adequate level of living. In high tenancy areas throughout the country, tenant farms are smaller and less productive than owner farms.

The need for ownership: The time for establishment of adequate family-type units is now more auspicious than at any time in the last 50 years. In some parts of the country, farms are lying idle as a result of the draft of farmers and farm laborers into various war activities. Real possibilities exist for the combination of idle, inadequate units into adequate farms capable of substantial food production and adequate family support. Parts of farm tracts now idle because of labor shortages can be amalgamated with adjoining inadequate units to make family-type farms. Farm operators now on small units can move to idle adequate tracts and their vacated farms be combined with other small units. Numerous such possibilities exist. Thus, the Nation's food production can be stepped up and its rural manpower used to the maximum.

In such adjustments careful consideration should be given not only to the problem of determining the optimum size of the farm, and the capacity of the operator, but also of assuring security of tenure. Maximum production cannot be obtained unless tenure relationships are stable. As a result of stable tenure and the possibility of long-time planning of farm practices, owners have shown themselves to be far more productive than tenants.

General Plan: The farm ownership program, authorized by the Bankhead-Jones Farm Tenant Act has been in operation since 1937. Essentially the work under this program is to make farms whose capacities to produce have been established available for purchase to tenants, sharecroppers, hired labor and other individuals whose capacity for farm management has been demonstrated, but who have been operating inadequate units.

Both the farm family and the farm itself are carefully appraised before any loan for the purchase of a farm is approved. The selections are made after consideration not only by the county supervisors and by farm tenancy specialists and engineers, but by a local county committee composed of three farmers as provided by the terms of the Act. By this process of careful selection every reasonable prospect of success in the enterprise is assured.

After a family's application has been approved and a farm determined upon, a loan is made to cover the cost of land and buildings, and for necessary improvements. The loan is repayable under terms of a 40 year mortgage bearing 3% interest.

The work under this Act is not limited to the making of loans and the collection of payments, but includes the furnishing of farm management assistance to the new owner.

Examples of Progress and Current Program:

Farm Tenancy Loans: Since the passage of the Farm Tenant Act, 28,945 farm families have received loans and have become owners, through June 30, 1942. Applications for these loans have far exceeded the number which could be made within the limits of the funds available. During the fiscal year 1942, as well as all preceding years, there has been an average of approximately 20 applications for each loan made. Table I shows by states the number of loans made and applications received each fiscal year.

In accordance with the provisions of section 4 of the Bankhead-Jones Act, the amount available for loans during any fiscal year is distributed among the several states and territories on the basis of farm population and the prevalence of tenancy. The allocation factors have been obtained each year from the most recent data available in the U. S. Census. Table II shows the method of determining the allocation of funds.

During the five years of the farm ownership program, 28,945 families have received farm ownership loans averaging \$5,638 each. These loans ranged in average size from \$3,840 in Georgia to \$10,182 in Illinois. (See Table III, and Figures 1 and 2.)

The average size of the 8,617 farm ownership loans made in 1942 was \$5,553, slightly less than during the four years previous. (See Table IV for distribution by states.) One reason for this slight decrease was the issuance of Conservation Order L-41 by the War Production Board, which had the effect of restricting the value of new construction for farm homes to \$200 and of other farm buildings to a total of \$1,000.

The average purchase price of the land in the farm unit itself during 1942 was \$3,807, or about \$30 per acre. In accordance with the legislation under which this program operates, loans may not be made for the purchase of farms of a greater value than that of the average farm unit of 30 acres or more in the county in which the purchase is to be made.

The average size of farms purchased during the entire five years of the program was 133 acres; and about one-fourth of all farms purchased were less than 80 acres in size. (See Table V and Figure 3.) In 1942 the average size was 125 acres.

The farms purchased under this program represent economic, well-balanced, family-type units, capable of utilizing the family's labor to the maximum and of making possible an adequate level of living from the farm operations. Extensive research into minimum requirements of resources necessary for these purposes has been undertaken by research agencies, notably the Bureau of Agricultural Economics, as a basis for the administration of this program.

During the fiscal year 1942 about 30 percent of the average farm ownership loan was used for improvements on the land and in the buildings on the land. Table VI indicates the amount used by states for (a) purchase of farms; (b) land improvement; (c) buildings other than dwellings; and (d) dwellings, new and repairs.

In compliance with the WPB Conservation Order L-41 mentioned above, special procedures were developed to keep all construction and improvement costs at a minimum. Plans for expansible houses and temporary shelters were developed to enable the borrower to defer the heavy construction work until after the war. All construction was deferred for the duration except that absolutely necessary to keep the farm in production.

The repayment of the majority of the loans made under this program is based upon a variable payment plan which is provided for in the enabling legislation. In 1942 all new borrowers came in the program under this plan, which simply enables borrowers to make smaller payments in poor years and larger payments in good years, instead of paying a fixed amount each year regardless of circumstances.

The amount of principal and interest which had become due as of June 30, 1942, was \$8,435,671, of which \$8,231,071 or 97.6 percent, had been collected as of that date. In addition to this, \$1,469,635 has been collected as extra payments, i.e., payments over and above that which has matured. Of the total amount collected, \$3,840,374 represents payments on principal. An analysis of maturities and collections by states as of June 30, 1942, is shown in Table VII. The total principal amounts outstanding as of June 30, 1942, are shown by states in Table VIII.

The 1944 program: The Budget provides authorization to borrow \$30,000,000 from the Reconstruction Finance Corporation to be used for farm ownership and enlargement loans in the fiscal year 1944. This would, of course, continue the same kind of financial arrangement as that under which the loan program operates at the present time.

It is estimated that this amount of money will enable the Farm Security Administration to make 6,309 farm ownership loans during 1944, bringing the total number of new owners up to 35,254 by the end of that year. Table IX shows the distribution by states of the amount available in the fiscal year 1943 and the amount requested for the fiscal year 1944, together with the estimated number of loans that will be made in each state.

Technical services, including county committees: In accordance with Section 42 of the Bankhead-Jones Farm Tenant Act, there has been appointed in each county in which the program operates a county committee composed of three farmers. Each member of the committee is allowed compensation at the rate of \$3.00 per day while engaged in the performance of official duties, and, in addition, is granted an allowance of \$1.50 per day for traveling and subsistence expenses. While the Act provides that compensation shall not be allowed for more than five days per month, the committees actually serve about twenty days per year. It is the responsibility of the county committee to determine the fitness of each applicant for a loan, to examine and appraise farms with respect to which an application for a loan is made, and is required to certify that each successful applicant for a loan is, by reason of character, ability and experience, likely to successfully carry out the undertakings required of him; that the farm to be purchased through the loan is of such character that there is reasonable likelihood that the purposes of the Act will be fulfilled, and that the purchase price is the reasonable value of the farm, as well as the fact that the loan recommended is not for the purchase of the farm of greater value than the average farm unit of 30 acres or more in the county, parish, or locality in which the loan is to be made.

The applicant and prospective borrower is also provided with additional technical advice and services through qualified appraisers and engineers. An average of approximately one and one-half farms are appraised and inspected for each farm that is finally selected for purchase. It is,

therefore, estimated that it will be necessary to appraise and inspect more than 9,000 farms during the fiscal year 1944, in order to find suitable farms for the approximately 6,300 borrowers to whom loans will be approved.

Administrative expenses: Under the provisions of Title I of the Bankhead-Jones Farm Tenant Act, the Secretary has the responsibility for making properly secured loans, and also for their subsequent supervision to insure sound farming practices. In the fiscal year 1944, as in the past, the sum available for this purpose provides for only a limited number of personnel for administrative services. Services which are employed solely for the farm ownership program and assigned exclusively on that program are entirely financed from the appropriation.

After this personnel and its incidental expenses have been provided for, additional personnel performing work in connection with the farm ownership program, but whose time is not exclusively devoted to this program, is financed from this appropriation to the extent to which the funds will permit. As the scope of the farm ownership program increases each year with the addition of new loan cases, the administrative work involved greatly increases. Consequently, it becomes more difficult each year to provide the necessary services from the limited appropriation that is made available for administrative and supervisory and technical services.

In the past, the amount appropriated for this purpose has not been sufficient entirely to finance the salaries and expenses of all personnel engaged both full-time or part-time in connection with the farm ownership program. Additional personal services required for administering the farm ownership program, over and above that to be financed from this appropriation, have been and are expected to be supplied in 1944, in accordance with the authority contained in section 41 of the Bankhead-Jones Act, by the Office of the Solicitor and the Farm Security Administration through officers and employees engaged primarily in administering other Farm Security Administration programs.

Table I Farm Tenancy: Number of Applications Received and Number of Borrowers by Fiscal Years

State and territory (1)	Fiscal Year 1938		Fiscal Year 1939		Fiscal Year 1940		Fiscal Year 1941		Fiscal Year 1942		Total number borrowers since inception as of 6/30/42 (12)
	Number of applications received (2)	Number of loan applications received (3)	Number of applications received (4)	Number of loan applications received (5)	Number of applications received (6)	Number of loan applications received (7)	Number of applications received (8)	Number of loan applications received (9)	Number of applications received (10)	Number of loan applications received (11)	
U. S. TOTAL	38,060	1,886	109,912	4,190	138,131	5,981	116,966	8,331	175,028	8,617	28,945
Alabama	5,048	175	18,621	345	13,652	557	14,906	767	13,192	718	2,562
Arizona	45	2	91	4	73	6	136	6	187	2	20
Arkansas	2,156	120	12,565	291	9,086	394	7,319	552	10,601	461	1,818
California	112	11	550	28	44	14	755	49	1,580	57	189
Colorado	366	13	369	26	627	27	837	35	1,233	36	137
Connecticut	30	1	15	3	37	3	57	1	41	3	11
Delaware	45	3	92	7	126	8	109	10	187	10	38
Florida	269	15	636	36	1,686	54	3,303	69	1,980	78	252
Georgia	4,556	177	12,766	375	13,360	692	15,422	873	15,441	867	2,924
Idaho	129	5	481	10	272	16	207	21	471	19	71
Illinois	748	34	1,913	81	2,323	115	3,171	157	5,109	172	559
Indiana	245	23	663	49	1,346	76	1,663	107	2,528	100	355
Iowa	579	36	946	84	3,289	152	4,011	197	5,626	194	663
Kansas	390	24	645	59	1,453	93	1,405	128	2,399	126	430
Kentucky	815	50	2,381	102	3,377	102	4,243	172	5,151	253	679
Louisiana	1,248	64	3,359	164	5,388	299	4,878	358	6,932	418	1,303
Maine	31	4	30	6	457	8	241	7	390	7	32
Maryland	29	6	116	21	274	29	441	32	1,044	37	125
Massachusetts	20	1	19	3	60	2	119	5	148	17	17
Michigan	156	17	299	40	435	47	795	79	1,255	80	265
Minnesota	510	29	783	65	1,431	102	1,788	131	1,933	132	459
Mississippi	2,439	175	9,547	405	9,374	540	7,976	712	10,414	791	2,622
Missouri	1,298	99	3,270	126	6,420	181	6,018	289	7,892	264	920
Montana	105	4	117	9	262	14	244	18	514	21	66
Nebraska	320	24	773	51	1,119	72	1,172	102	1,992	109	358
Nevada	15	1	31	1	14	1	14	1	34	1	5
New Hampshire	8	1	36	2	39	1	86	1	99	3	8
New Jersey	72	2	93	13	130	8	158	11	188	11	45
New Mexico	220	5	174	7	151	10	365	14	309	11	47
New York	694	13	609	36	855	53	1,119	49	1,442	61	212
North Carolina	1,057	96	5,964	270	8,725	319	8,301	593	9,841	695	1,973
North Dakota	199	15	549	39	808	58	960	78	1,223	87	277
Ohio	348	30	872	72	1,699	102	2,577	143	3,193	143	490
Oklahoma	1,051	81	3,546	182	9,318	240	7,993	371	12,014	346	1,220
Oregon	65	6	129	9	366	17	321	21	490	16	69
Pennsylvania	483	22	923	75	825	66	1,911	99	2,225	103	365
Rhode Island	5	0	12	1	21	1	5	1	3	0	3
South Carolina	2,550	119	7,434	230	3,993	368	5,181	486	9,998	479	1,682
South Dakota	121	19	441	33	574	61	1,042	77	1,462	88	278
Tennessee	1,604	83	6,310	178	9,771	211	10,246	312	8,028	449	1,203
Texas	3,212	199	7,653	376	16,473	510	17,816	597	17,963	511	2,153
Utah	133	2	120	8	235	8	261	8	343	6	32
Vermont	14	1	20	3	263	6	316	8	316	8	26
Virginia	451	43	2,116	104	2,855	109	2,762	175	2,686	195	626
Washington	272	7	456	17	946	22	601	27	799	24	97
West Virginia	240	19	490	29	788	45	1,282	76	1,633	115	284
Wisconsin	230	18	457	42	764	66	804	97	1,052	118	341
Wyoming	152	5	3	3	83	6	149	6	233	8	28
Hawaii	55	7	205	38	295	55	195	70	156	27	197
Puerto Rico	3,200	0	4	32	1,467	65	1,400	133	1,500	181	441

a/ No new applications taken in this fiscal year; loans made to borrowers who submitted applications during 1938 fiscal year.

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table II Farm Tenancy: Method of Determining the Percentage Distribution
for Allocating Loan Funds, by States

State and territory (1)	Farm population 1940 a/ (2)	Percentage of tenancy 1940 b/ (3)	Allocation factor: Farm population mul- tiplied by percentage of tenancy 1940 c/ (4)	Percentage distribution of funds d/ (5)
U. S. TOTAL	31,782,907	38.591	12,351,408	100.0000000
Alabama	1,343,080	58.782	789,489	6.3918966
Arizona	114,448	11.588	13,262	0.1073742
Arkansas	1,113,102	53.279	593,050	4.8014734
California	670,426	19.146	128,360	1.0392317
Colorado	252,863	37.207	94,083	0.7617167
Connecticut	104,810	7.173	7,518	0.0608677
Delaware	45,974	32.566	14,972	0.1212160
District of Columbia	227	18.462	42	0.0003393
Florida	305,240	25.170	76,829	0.6220254
Georgia	1,367,627	60.107	822,040	6.6554315
Idaho	202,582	25.543	51,746	0.4189443
Illinois	978,907	43.095	421,860	3.4154806
Indiana	816,408	28.291	230,970	1.8699890
Iowa	930,810	47.574	442,824	3.5852068
Kansas	606,944	44.920	272,639	2.2073534
Kentucky	1,261,040	33.146	417,984	3.3841024
Louisiana	853,949	59.442	507,604	4.1096879
Maine	176,273	6.462	11,391	0.0922224
Maryland	245,623	26.107	64,125	0.5191699
Massachusetts	147,214	7.101	10,454	0.0846354
Michigan	870,832	16.952	147,623	1.1951951
Minnesota	914,609	32.337	295,757	2.3945212
Mississippi	1,403,142	66.240	929,441	7.5249817
Missouri	1,125,413	35.594	400,580	3.2431887
Montana	176,054	27.836	49,006	0.3967676
Nebraska	498,220	52.822	263,170	2.1306862
Nevada	15,862	14.442	2,291	0.0185468
New Hampshire	70,484	6.367	4,488	0.0363337
New Jersey	143,058	15.618	22,343	0.1808927
New Mexico	178,349	17.039	30,389	0.2460358
New York	730,453	12.754	93,162	0.7542620
North Carolina	1,659,477	44.372	736,343	5.9616124
North Dakota	327,943	45.127	147,991	1.1981697
Ohio	1,088,655	26.273	286,022	2.3157061
Oklahoma	930,412	54.440	506,516	4.1008786
Oregon	258,751	18.239	47,194	0.3820907
Pennsylvania	914,799	16.031	146,651	1.1873255
Rhode Island	17,308	10.252	1,774	0.0143661
South Carolina	916,611	56.110	514,310	4.1639819
South Dakota	307,318	52.996	162,866	1.3186046
Tennessee	1,275,582	40.278	513,779	4.1596787
Texas	2,159,548	48.914	1,056,321	8.5522334
Utah	104,658	13.286	13,905	0.1125771
Vermont	106,532	9.940	10,589	0.0857334
Virginia	986,447	26.936	265,709	2.1512474
Washington	340,402	17.704	60,265	0.4879182
West Virginia	532,615	22.742	121,127	0.9806760
Wisconsin	882,938	22.989	202,979	1.6433641
Wyoming	72,892	24.224	17,657	0.1429583
Alaska	2,393 e/	20.064	480	0.0038872
Hawaii	149,435 e/	70.667	105,601	0.8549732
Puerto Rico	1,084,168 e/	20.646 e/	223,837	1.8122413

a/ 1940 Census of Population

b/ Number of tenant-operated farms divided
by number of all farms for each State:
Census of Agriculture, 1940.

c/ Total factor is sum of State factors.

d/ State factor divided by Column "4" total.

e/ Estimated by the Bureau of the Census.

Table III Farm Tenancy: Distribution of Loans, by States 1/

State and territory (1)	Fiscal years 1938-39-40-41			Fiscal year 1942			Fiscal years 1938-39-40-41-42		
	Number of borrowers (2)	Amount of obligations (3)	Average per borrower (4)	Number of new borrowers (5)	Amount of loan obligations (6)	Average per borrower (7)	Number of borrowers (8)	Amount of loan obligations (9)	Average per borrower (10)
U. S. TOTAL	20,328	115,209,484	5,667	8,617	47,978,274	5,553	28,945	163,187,758	5,638
Alabama	1,844	7,402,398	4,014	718	2,821,545	3,926	2,562	10,223,943	3,991
Arizona	18	146,537	8,141	2	22,920	11,460	20	169,457	8,473
Arkansas	1,357	6,006,329	4,426	461	1,846,313	3,987	1,818	7,852,642	4,319
California	132	1,161,953	8,803	57	520,386	9,122	189	1,682,339	8,901
Colorado	101	1,001,469	9,915	36	380,732	10,490	137	1,382,201	10,089
Connecticut	8	61,537	7,692	3	30,184	10,061	11	91,721	8,338
Delaware	28	148,543	5,305	7	60,156	6,016	38	208,699	5,492
Florida	174	705,102	4,052	78	295,485	3,782	252	1,000,587	3,971
Georgia	2,057	7,887,818	3,835	867	3,339,899	3,847	2,924	11,227,657	3,840
Idaho	52	502,594	9,673	19	197,700	10,405	71	700,694	9,869
Illinois	387	3,984,607	10,296	172	1,707,016	9,924	559	5,691,623	10,182
Indiana	255	2,356,163	9,240	100	937,880	9,379	355	3,294,043	9,279
Iowa	469	4,246,066	9,053	194	1,796,440	9,251	663	6,042,506	9,114
Kansas	304	2,656,544	8,739	126	1,401,867	8,705	430	3,758,411	8,740
Kentucky	426	3,180,004	7,465	253	1,695,793	6,694	679	4,675,797	7,181
Louisiana	885	4,534,909	5,124	418	1,981,590	4,735	1,303	6,516,499	5,001
Maine	25	101,993	4,080	7	41,843	5,899	32	143,836	4,495
Maryland	88	552,703	6,281	37	259,285	7,007	125	811,968	6,496
Massachusetts	11	56,732	5,257	6	39,580	6,597	17	96,312	5,665
Michigan	183	1,406,224	7,684	80	599,390	7,492	263	2,005,614	7,626
Minnesota	327	2,768,159	8,465	132	1,200,625	9,092	459	3,968,784	8,647
Mississippi	1,831	7,782,289	4,250	791	3,454,602	4,363	2,622	11,236,891	4,286
Missouri	656	4,062,580	6,193	264	1,627,132	6,160	920	5,689,712	6,184
Montana	45	443,708	9,816	21	196,459	9,237	66	638,167	9,669
Nebraska	249	2,454,254	9,856	109	1,064,288	9,761	358	3,518,542	9,828
Nevada	4	35,050	8,762	1	7,750	7,750	5	42,800	8,560
New Hampshire	5	29,388	5,878	3	18,410	6,137	8	47,798	5,975
New Jersey	34	276,678	8,137	11	92,538	8,183	45	369,216	8,205
New Mexico	36	318,851	8,857	11	110,460	10,044	47	429,331	9,135
New York	151	824,708	5,462	61	363,968	5,967	212	1,188,676	5,607
North Carolina	1,278	5,829,326	4,561	695	2,975,006	4,279	1,973	8,804,332	4,462
North Dakota	190	1,271,448	6,692	87	597,800	6,840	277	1,869,248	6,748
Ohio	347	2,838,630	8,180	143	1,154,885	8,073	490	3,993,515	8,150
Oklahoma	874	5,446,551	6,232	346	2,064,995	7,122	1,220	7,511,546	7,559
Oregon	53	470,526	8,878	16	142,832	8,886	69	613,358	8,889
Pennsylvania	262	1,602,384	6,116	103	593,119	5,725	365	2,195,503	6,015
Rhode Island	3	14,733	4,911	0	0	0	3	14,733	4,911
South Carolina	1,203	5,027,961	4,179	479	2,014,342	4,202	1,682	7,042,303	4,187
South Dakota	190	1,432,016	7,537	88	661,150	7,494	278	2,093,166	7,529
Tennessee	784	4,387,823	5,597	419	2,084,210	4,963	1,203	6,472,033	5,380
Texas	1,642	11,711,982	7,133	511	4,296,377	10,403	2,153	16,008,359	8,891
Utah	26	203,324	7,820	6	49,085	7,881	32	252,409	7,888
Vermont	18	105,911	5,884	8	41,441	5,180	26	147,332	5,667
Virginia	431	2,335,043	5,418	195	1,011,850	5,187	626	3,346,893	5,346
Washington	73	590,567	8,090	24	228,719	9,530	97	819,286	8,446
West Virginia	169	901,050	5,332	115	489,566	4,253	284	1,390,616	4,897
Wisconsin	223	1,668,997	7,484	118	822,908	6,974	341	2,491,905	7,308
Wyoming	20	180,449	9,022	8	71,465	8,933	28	251,914	8,997
Hawaii	170	911,457	0	27	118,924	4,405	197	1,030,381	5,230
Puerto Rico	230	1,185,016	0	181	747,424	4,129	411	1,932,440	4,702

1/ Loan obligations, Title I, Farm Tenant Act, including supplemental loans to prior year borrowers

2/ Includes \$339,363 from Corporation Trust Funds

3/ Includes \$1,502 from Corporation Trust Funds

4/ Includes \$340,865 from Corporation Trust Funds

Table IV
Farm Tenancy: Number of Loans, Average Size of Loan and Number of TP Loans Approved by Size of Loan, Fiscal Year 1942

State and territory (1)	Number of loans (2)	Average loan per borrower (3)	Percent of tenant purchase loans by loan group									
			Less than \$3,000 (4)	\$3,000 to \$4,000 (5)	\$4,000 to \$5,000 (6)	\$5,000 to \$7,500 (7)	\$7,500 to \$10,000 (8)	\$10,000 and over (9)	\$10,000 and over (10)			
U. S. TOTAL	8,617	5,253	8.5	25.9	23.8	14.6	11.0	11.3	7.9			
Alabama	718	3,926	16.4	35.9	35.3	11.9	.5	.0	.0			
Arizona	2	11,160	.0	.0	.0	.0	.0	.0	100.0			
Arkansas	461	3,987	16.1	39.8	27.3	14.8	7.7	.8	.0			
California	57	9,122	.0	.0	.0	.0	3.6	50.0	46.4			
Colorado	36	10,490	.0	.0	.0	.0	11.1	19.4	69.5			
Connecticut	3	10,061	.0	.0	.0	.0	33.3	33.3	33.4			
Delaware	10	6,016	10.0	30.0	20.0	.0	.0	30.0	10.0			
Florida	78	3,782	19.8	25.1	16.3	2.3	.0	.0	.0			
Georgia	867	3,817	14.5	10.5	13.3	1.7	.0	.0	.0			
Idaho	19	10,405	.0	.0	.0	.0	.0	33.3	66.7			
Illinois	172	9,924	.0	1.4	2.1	2.1	8.5	29.6	56.3			
Indiana	100	9,379	.0	1.7	1.7	1.7	15.5	22.8	46.6			
Iowa	184	9,831	.0	.0	.5	6.3	11.4	37.5	44.3			
Kansas	126	8,705	.0	.0	.5	4.4	27.4	41.6	25.7			
Kentucky	253	6,684	.4	4.8	12.3	21.9	34.6	18.0	8.0			
Louisiana	418	4,735	4.2	31.0	29.6	28.7	4.2	.7	1.6			
Maine	7	5,899	.0	9.0	18.2	27.3	18.2	18.2	.0			
Maryland	37	7,007	.0	13.2	10.5	15.8	13.2	36.8	10.5			
Massachusetts	6	6,597	.0	.0	.0	25.0	.0	75.0	.0			
Michigan	80	7,492	.0	.0	2.6	9.1	12.9	12.8	2.6			
Minnesota	132	9,092	.0	.0	1.5	4.6	14.5	12.0	37.4			
Mississippi	791	4,363	15.3	31.8	21.4	18.5	11.3	1.1	.0			
Missouri	264	6,160	2.5	7.4	15.6	25.1	29.6	15.7	4.1			
Montana	21	9,237	8.5	.0	.0	.0	16.7	37.5	37.5			
Nebraska	109	9,761	.8	.0	.0	1.6	10.7	36.1	50.8			
Nevada	1	7,750	.0	.0	.0	.0	.0	100.0	.0			
New Hampshire	3	6,137	.0	.0	.0	66.7	33.3	.0	.0			
New Jersey	11	8,183	.0	.0	.0	10.0	20.0	60.0	10.0			
New Mexico	11	10,044	.0	.0	.0	.0	8.3	33.3	58.4			
New York	61	5,967	1.5	5.6	19.7	26.7	31.0	15.5	.0			
North Carolina	695	4,279	9.6	30.3	35.6	19.6	4.9	.0	.0			
North Dakota	87	6,840	1.1	.0	9.1	22.7	40.9	21.6	4.6			
Ohio	143	8,073	.0	1.0	7.6	12.4	10.5	45.7	22.8			
Oklahoma	346	7,122	10.4	15.8	15.8	11.3	19.2	24.1	3.4			
Oregon	16	8,886	.0	.0	.0	5.9	11.8	47.1	35.2			
Pennsylvania	103	5,725	1.1	9.1	28.4	23.0	23.9	11.4	1.1			
Rhode Island	0	.0	.0	.0	.0	.0	.0	.0	.0			
South Carolina	479	4,202	10.6	33.5	33.7	20.7	1.5	.0	.0			
South Dakota	88	7,494	.0	1.1	3.3	18.9	37.8	28.9	10.0			
Tennessee	419	4,963	3.1	18.8	32.2	25.1	18.8	2.0	.0			
Texas	511	10,403	.6	3.4	7.3	7.9	19.0	36.8	25.0			
Utah	6	7,881	.0	.0	.0	33.3	16.7	33.3	16.7			
Vermont	8	5,180	18.3	9.0	27.3	36.4	.0	9.0	.0			
Virginia	195	5,187	7.7	20.7	29.3	24.1	6.7	7.7	3.8			
Washington	24	9,530	.0	.0	.0	3.7	7.5	48.0	40.8			
West Virginia	115	4,253	10.9	36.2	26.1	18.5	5.0	.8	2.5			
Wisconsin	118	6,974	.0	.9	12.3	16.6	31.6	28.1	10.5			
Wyoming	8	8,933	.0	.0	.0	.0	.0	77.8	22.2			
Hawaii	27	4,405	18.5	22.5	29.0	15.0	15.0	.0	.0			
Puerto Rico	181	4,429	9.8	53.5	16.9	8.7	9.9	1.2	.0			

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table V Farm Tenancy; Size of Tenant Purchase Farms by States

State and territory	Average acreage of all farms of 30 acres or more in 1940	Number of borrowers in operation through June 30, 1942	Average acreage of tenant purchase farms	Percent of farms by acreage group						
				Under 30 acres	30-39 acres	40-79 acres	80-119 acres	120-159 acres	160-319 acres	320 acres and over
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
U. S. TOTAL	227	28,945	133	.9	1.1	21.3	32.8	19.2	20.5	4.2
Alabama	109	2,562	103	.0	*	22.9	52.3	16.4	8.2	.2
Arizona	201	20	58	5.0	5.0	55.0	35.0	.0	.0	.0
Arkansas	116	1,818	95	*	.3	40.2	36.3	12.9	10.0	.3
California	470	189	56	3.7	7.5	73.8	13.3	.0	1.2	.5
Colorado	736	137	227	.0	.0	5.8	33.6	8.8	33.5	18.3
Connecticut	112	11	117	16.7	.0	25.0	25.0	8.3	25.0	.0
Delaware	126	38	128	.0	.0	15.8	26.3	31.6	26.3	.0
Florida	225	252	151	.0	1.1	6.1	18.3	32.6	40.4	1.5
Georgia	129	2,924	124	*	.2	10.2	47.2	26.8	15.1	.5
Idaho	289	71	122	.0	.0	11.4	62.9	7.2	14.3	4.2
Illinois	167	599	141	.0	.0	1.9	28.0	32.9	36.6	.6
Indiana	151	355	113	.0	.0	6.6	53.9	26.1	13.4	.0
Iowa	176	663	137	.0	.0	1.1	26.5	39.0	33.4	*
Kansas	340	430	261	.0	.0	.3	.5	9.4	64.3	25.5
Kentucky	112	679	122	.0	.0	8.5	46.7	30.0	14.5	.3
Louisiana	117	1,303	77	.3	1.4	66.0	21.8	5.0	4.9	.6
Maine	130	32	142	.0	.0	5.4	40.5	27.0	24.4	2.7
Maryland	137	125	148	.0	.8	10.9	28.9	17.2	42.2	.0
Massachusetts	114	17	101	.0	18.7	12.5	37.5	18.8	12.5	.0
Michigan	113	263	121	.8	.4	3.5	34.7	42.1	18.5	.0
Minnesota	178	459	181	.0	.0	.2	4.4	19.3	69.8	6.3
Mississippi	115	2,622	88	*	*	47.9	35.0	12.0	5.1	*
Missouri	157	920	157	*	*	2.4	15.7	29.3	51.5	1.1
Montana	1196	66	351	.0	1.4	2.9	17.4	8.8	37.6	31.9
Nebraska	449	358	303	.0	.3	.3	8.2	10.3	40.7	31.2
Nevada	1,331	5	264	.0	.0	.0	20.0	20.0	40.0	20.0
New Hampshire	143	8	182	.0	.0	10.0	20.0	20.0	50.0	.0
New Jersey	122	45	112	.0	.0	18.6	41.8	27.9	11.7	.0
New Mexico	1,704	47	308	.0	.0	8.4	22.9	4.1	2.1	62.5
New York	138	212	159	.0	.0	4.5	31.4	28.9	34.3	.9
North Carolina	96	1,973	93	.5	1.5	43.4	34.7	13.1	6.6	.2
North Dakota	523	277	526	.0	.0	.0	.0	1.1	5.7	93.2
Ohio	117	490	110	.0	.0	6.4	60.0	25.2	8.2	.2
Oklahoma	220	1,220	188	.0	*	2.0	13.0	19.3	54.4	11.3
Oregon	448	69	135	.0	.0	21.4	40.0	14.3	15.7	8.6
Pennsylvania	110	365	131	.0	.0	10.6	42.1	30.6	15.9	.8
Rhode Island	116	3	25	100.0	.0	.0	.0	.0	.0	.0
South Carolina	119	1,682	112	.2	.9	24.8	42.0	19.8	11.7	.6
South Dakota	564	278	475	.0	.0	.0	.3	1.8	35.9	62.0
Tennessee	108	1,203	118	.0	.0	19.9	39.5	23.2	16.6	.8
Texas	407	2,153	177	.1	.4	3.7	21.2	25.0	41.0	8.6
Utah	418	32	86	3.1	6.2	43.8	28.1	9.4	9.4	.0
Vermont	183	26	197	.0	.0	.0	20.0	16.7	63.3	.0
Virginia	136	626	137	.0	.6	15.5	34.7	20.6	26.6	2.0
Washington	353	97	159	.0	1.0	24.5	28.5	8.2	25.4	12.4
West Virginia	125	284	143	.0	.0	11.2	32.9	25.1	29.8	1.0
Wisconsin	132	341	137	.0	.0	3.0	31.0	33.0	32.7	.3
Wyoming	2,006	28	186	.0	.0	.0	10.3	13.8	69.0	6.9
Hawaii	0	197	29	64.8	11.2	17.9	4.1	1.0	1.0	.0
Puerto Rico	0	411	37	21.4	50.6	25.0	2.5	.5	.0	.0

* Less than .05%

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table VI Farm Tenancy Loans: Number of Borrowers, Amount of Loans by Type of Expenditure, Fiscal Year 1942

State and territory (1)	Number of borrowers (2)	Amount borne by borrowers (3)	Amount of loans by type of expenditure				
			Purchase of farm and incidental costs (4)	Land improvement (5)	Buildings other than dwellings (6)	New Dwellings (7)	Repairs (8)
U. S. TOTAL	8,617	\$41,933	\$33,155,949	\$2,035,656	\$5,767,204	\$5,006,298	\$2,055,100
Alabama	718	0	1,559,352	113,854	472,060	633,670	42,609
Arizona	2	0	17,625	0	195	5,100	0
Arkansas	461	205	1,095,556	67,314	322,319	327,270	34,099
California	57	1,140	421,670	20,971	33,082	21,165	24,638
Colorado	36	250	308,101	9,655	33,282	7,600	22,344
Connecticut	3	0	22,850	0	5,466	0	1,868
Delaware	10	0	45,161	400	9,890	0	4,705
Florida	78	100	155,197	39,585	72,098	72,098	6,925
Georgia	867	200	1,765,569	175,624	449,896	840,255	108,695
Iaho	19	600	150,480	1,415	14,728	14,270	17,407
Illinois	172	2,215	1,444,797	58,330	125,551	17,180	63,373
Indiana	100	900	771,572	28,523	90,358	7,272	41,055
Iowa	194	15,605	1,548,934	37,501	152,739	13,145	59,736
Kansas	126	664	859,083	17,633	121,379	23,043	81,393
Kentucky	253	1,000	1,226,187	141,617	154,961	85,821	88,207
Louisiana	418	0	1,180,152	136,328	245,021	370,959	49,130
Maine	7	790	34,640	0	6,227	0	1,766
Maryland	37	0	187,273	1,185	53,227	3,040	14,540
Massachusetts	6	0	29,455	200	6,191	0	3,734
Michigan	80	70	452,519	6,990	83,972	5,700	50,279
Minnesota	132	3,005	991,545	4,820	143,730	3,050	60,485
Mississippi	791	0	2,114,582	187,366	532,020	522,020	97,780
Missouri	264	275	1,196,768	95,867	182,636	61,713	90,423
Montana	21	0	140,494	5,010	20,060	16,540	14,355
Nebraska	109	3,206	912,865	8,465	88,886	2,300	54,978
Nevada	1	0	7,525	125	100	0	0
New Hampshire	3	0	12,634	537	2,988	0	2,251
New Jersey	11	0	72,803	620	15,770	0	3,345
New Mexico	11	0	79,611	3,917	9,512	14,425	3,015
New York	61	110	277,803	3,597	61,992	0	20,686
North Carolina	695	925	1,925,101	177,947	388,227	230,742	253,914
North Dakota	87	1,500	419,227	7,808	95,549	14,702	62,014
Ohio	143	1,512	940,631	31,941	130,714	0	53,111
Oklahoma	346	150	1,465,426	69,840	203,271	257,175	69,433
Oregon	16	0	105,222	3,138	15,467	14,178	4,827
Pennsylvania	103	0	440,233	6,024	112,527	0	34,335
Rhode Island	0	0	0	0	0	0	0
South Carolina	479	467	1,218,591	53,207	275,596	373,800	93,615
South Dakota	88	1,210	527,615	14,013	70,368	2,127	48,237
Tennessee	419	140	1,318,063	158,034	262,776	244,170	101,807
Texas	511	1,551	3,056,311	200,504	382,755	586,865	71,493
Utah	6	0	37,818	1,342	5,740	0	4,185
Vermont	8	0	31,947	0	6,002	0	3,432
Virginia	195	1,000	681,483	66,081	124,576	57,518	83,192
Washington	24	0	171,036	4,830	23,824	14,665	14,364
West Virginia	115	500	352,990	44,991	49,793	4,655	37,637
Wisconsin	118	2,328	658,565	8,751	113,655	0	44,265
Wyoming	8	315	56,930	515	6,737	2,800	4,798
Hawaii	27	0	80,933	8,371	11,760	13,660	4,200
Puerto Rico	181	0	585,024	28,675	9,720	121,605	2,400

Table VII
Farm Tenancy: Loans, Maturities, Collections and Delinquencies Cumulative as of June 30, 1942 1/

State and territory (1)	Cumulative loans approved		Maturities 2/ principal and interest		Principal 2/ repayments		Interest payments		Collections Extra 3/ principal repayments		Unapplied 4/ collections		Total collections		Delinquencies Number		Percent ratio of principal and interest collections to maturities (12)
	Number	Amount	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)						
U. S. TOTAL	28,945	163,187,758	8,135,671	3,810,374	44,390,697	1,469,635	78,832	2,779,538	1,670	204,600	97.6						
Alabama	2,562	10,223,913	410,647	156,839	218,554	97,990	7,083	510,166	71	5,254	98.7						
Arizona	20	169,157	7,305	1,311	3,200	311	0	6,928	5	711	90.3						
Arkansas	1,818	7,852,642	346,923	136,816	197,089	94,544	84	430,613	111	11,058	96.8						
California	189	1,682,339	64,725	25,171	37,362	9,311	520	72,394	15	2,192	96.6						
Colorado	137	1,382,201	79,129	35,608	44,995	12,445	0	90,048	4	1,525	98.1						
Connecticut	11	91,721	3,056	880	2,175	0	0	3,055	1	1	100.0						
Delaware	38	208,699	5,110	1,399	4,011	0	0	5,110	0	0	100.0						
Florida	252	1,000,587	30,919	7,533	21,894	10,768	7,503	147,686	12	1,487	97.6						
Georgia	2,924	11,227,657	497,362	207,325	278,998	105,460	5,815	596,628	111	11,999	97.6						
Idaho	71	700,694	147,262	20,676	20,644	9,311	0	50,631	10	1,942	95.5						
Illinois	559	5,641,623	364,069	180,650	174,648	35,207	6,226	396,651	14	8,951	97.6						
Indiana	355	3,234,013	232,657	117,913	114,216	21,007	2,177	252,313	24	3,528	98.5						
Iowa	663	6,042,506	169,314	191,116	217,786	33,545	4,571	447,018	8	4,428	99.9						
Kansas	130	3,758,111	208,352	100,277	104,156	240,429	115	240,429	15	3,919	98.1						
Kentucky	679	4,875,797	308,851	144,386	161,112	31,835	0	337,333	22	3,352	98.9						
Louisiana	1,403	6,516,169	165,238	39,171	107,520	36,316	159	183,467	118	18,247	89.0						
Maine	32	113,836	1,962	750	877	2,123	0	3,746	2	336	82.9						
Maryland	125	811,968	21,382	6,800	14,816	77	0	21,723	11	1,736	92.6						
Massachusetts	17	96,312	2,174	597	1,250	0	0	1,836	1	338	84.5						
Michigan	263	2,005,614	125,972	61,268	64,310	11,510	131	137,218	4	394	99.7						
Minnesota	159	3,968,784	324,706	179,530	144,930	28,137	665	353,562	2	246	99.9						
Mississippi	2,622	11,236,891	395,439	72,727	189,848	92,916	108	355,679	312	32,814	88.9						
Missouri	920	5,689,712	373,170	180,609	189,706	40,311	6,499	417,126	34	2,855	99.2						
Montana	66	638,167	12,507	25,957	16,931	3,089	0	15,077	1	519	98.8						
Nebraska	358	3,518,542	242,117	136,200	101,483	13,610	5	251,238	15	4,434	98.2						
Nevada	5	42,900	3,518	1,667	1,871	3	0	3,521	0	0	100.0						
New Hampshire	8	17,798	612	178	178	0	0	178	1	434	29.1						
New Jersey	145	369,216	12,662	2,243	10,118	0	0	12,661	1	20	100.0						
New Mexico	17	129,331	29,034	14,169	14,815	4,319	2,900	36,233	1	20	99.9						
New York	212	1,188,676	39,284	13,170	22,931	243	0	36,644	15	2,863	92.7						
North Carolina	1,973	8,804,332	468,528	192,682	200,520	104,756	0	497,958	142	15,326	96.2						
North Dakota	277	1,869,248	162,171	114,539	133,687	5,340	6	163,563	23	3,954	97.6						
Ohio	1490	3,993,515	247,919	115,163	128,233	31,659	1,716	277,071	32	4,253	98.3						
Oklahoma	1,220	7,511,516	430,506	196,908	230,256	90,704	4,703	522,570	33	3,342	99.2						
Oregon	69	613,368	21,595	6,346	12,632	2,570	0	21,548	10	2,607	87.9						
Pennsylvania	365	2,195,503	88,413	41,934	44,777	801	0	84,512	38	4,602	94.8						
Rhode Island	3	14,733	330	0	330	0	0	330	0	0	100.0						
South Carolina	1,682	7,012,403	382,973	107,601	165,498	43,895	2,444	319,815	90	9,164	96.7						
South Dakota	278	2,093,166	132,627	80,307	84,770	5,086	221	135,564	16	2,551	98.1						
Tennessee	1,303	6,172,093	515,994	304,774	208,179	93,961	0	606,914	35	3,041	99.4						
Texas	2,153	16,008,359	862,818	340,698	509,730	172,172	24,135	1,100,737	80	12,390	98.6						
Utah	32	252,169	10,652	3,433	7,188	9,244	0	19,662	1	31	99.7						
Vermont	26	147,352	2,252	526	1,726	367	0	2,619	0	0	100.0						
Virginia	626	3,346,893	206,181	107,954	95,395	44,700	0	245,049	30	2,832	98.6						
Washington	97	819,286	33,780	11,090	17,765	2,793	0	34,648	8	1,924	94.3						
West Virginia	284	1,390,616	61,477	22,813	37,120	14,586	0	74,819	19	1,244	98.0						
Wisconsin	341	2,491,905	130,332	65,207	64,902	30,479	989	161,178	3	623	99.3						
Wyoming	28	251,914	15,234	5,680	8,985	1,470	0	16,135	3	769	96.3						
Hawaii	197	1,090,381	53,773	33,332	19,705	27,232	0	80,269	9	736	98.6						
Puerto Rico	411	1,932,140	74,368	24,286	36,370	6,239	0	66,895	16	13,652	81.6						

1/ Inclusive of Corporation Trust loans.

2/ Exclusive of extra payments.

3/ Payments over and above that which has matured.

4/ Collections unapplied as to principal or interest.

5/ Col. 4 - (Col. 5 ÷ Col. 6).

6/ (Col. 5 ÷ 6) ÷ Col. 4.

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table VIII Amount of Tenant Purchase Loans Outstanding As of June 30, 1942 by States 1/

State and Territory (1)	Amounts Outstanding (2)	State and Territory (3)	Amounts Outstanding (4)
U. S. TOTAL	\$140,440,137.41		
Alabama	8,003,371.97	New York	\$ 910,325.18
Arizona	168,408.56	North Carolina	7,570,677.26
Arkansas	6,353,372.88	North Dakota	1,531,767.91
California	1,569,992.57	Ohio	3,734,363.83
Colorado	1,127,868.68	Oklahoma	6,876,452.75
Connecticut	72,285.80	Oregon	593,053.16
Delaware	157,434.87	Pennsylvania	1,591,402.75
District of Columbia	0	Rhode Island	10,297.00
Florida	709,937.89	South Carolina	5,792,426.64
Georgia	9,367,850.34	South Dakota	1,653,718.85
Idaho	632,411.90	Tennessee	5,675,350.79
Illinois	5,384,744.17	Texas	15,348,037.42
Indiana	3,134,569.90	Utah	188,798.51
Iowa	5,745,218.59	Vermont	132,719.80
Kansas	3,255,999.04	Virginia	3,016,090.52
Kentucky	4,609,040.93	Washington	782,422.74
Louisiana	4,479,091.28	West Virginia	1,206,888.94
Maine	89,350.79	Wisconsin	2,271,519.71
Maryland	592,207.84	Wyoming	178,500.47
Massachusetts	70,322.41	Alaska	0
Michigan	1,745,902.26	Hawaii	866,806.86
Minnesota	3,748,677.56	Puerto Rico	1,583,456.10
Mississippi	8,379,200.47	Virgin Islands	0
Missouri	5,421,688.54		
Montana	558,051.37		
Nebraska	2,812,862.43		
Nevada	26,610.13		
New Hampshire	47,396.52		
New Jersey	251,165.33		
New Mexico	410,025.20		

1/ Includes ER and RFC Funds; does not include Corporation Trust Funds

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table **TX** Farm Tenancy: Estimated Distribution of Loans by States, Fiscal Years
1943 and 1944

State and territory (1)	Relative farm population and prevalence of tenancy (2)	Fiscal Year 1943			Fiscal Year 1944		
		Number of borrowers (3)	Amount of loan (4)	Average per borrower (5)	Number of borrowers (6)	Amount of loan (7)	Average per borrower (8)
U. S. TOTAL	100.00	6,814	\$32,500,000	4,800	6,309	\$30,000,000	4,800
Alabama	6.39	629	2,077,367	3,300	581	1,917,570	3,300
Arizona	0.11	3	34,897	9,900	3	32,212	9,900
Arkansas	4.80	445	1,560,479	3,500	412	1,440,443	3,500
California	1.04	41	337,750	8,200	38	311,770	8,200
Colorado	0.76	26	247,558	9,500	24	228,514	9,500
Connecticut	0.06	2	19,782	9,900	2	18,260	9,900
Delaware	0.12	7	39,395	5,500	7	36,365	5,500
District of Columbia	B		110			101	
Florida	0.62	65	202,158	3,100	60	186,607	3,100
Georgia	6.66	681	2,163,015	3,200	624	1,996,630	3,200
Idaho	0.42	15	136,157	8,700	14	125,684	8,700
Illinois	3.42	119	1,110,031	9,300	110	1,024,644	9,300
Indiana	1.84	71	607,747	8,500	66	560,997	8,500
Iowa	3.59	131	1,165,192	8,900	121	1,075,561	8,900
Kansas	2.21	91	717,390	7,700	86	662,207	7,700
Kentucky	3.38	185	1,099,833	5,900	172	1,015,231	5,900
Louisiana	4.11	340	1,335,649	3,900	316	1,232,906	3,900
Maine	0.09	5	29,972	5,800	5	27,667	5,800
Maryland	0.52	27	168,730	6,100	26	155,751	6,100
Massachusetts	0.09	5	27,507	5,300	5	25,391	5,300
Michigan	1.20	76	388,439	5,100	70	358,558	5,100
Minnesota	2.40	87	778,219	8,900	81	718,357	8,900
Mississippi	7.53	643	2,445,619	3,800	594	2,257,195	3,800
Missouri	3.24	189	1,054,036	5,500	177	972,956	5,500
Montana	0.40	17	128,950	7,600	16	119,030	7,600
Nebraska	2.13	75	692,473	9,200	69	639,205	9,200
Nevada	0.02	0	6,028	9,200	0	5,564	9,200
New Hampshire	0.04	2	11,809	6,000	2	10,900	6,000
New Jersey	0.18	7	58,790	8,300	7	54,268	8,300
New Mexico	0.25	9	79,962	8,100	9	73,811	8,100
New York	0.76	43	245,135	5,700	40	226,279	5,700
North Carolina	5.96	497	1,937,524	3,900	459	1,788,484	3,900
North Dakota	1.20	66	389,405	5,900	61	359,451	5,900
Ohio	2.32	100	752,605	7,500	93	694,712	7,500
Oklahoma	4.10	252	1,332,785	5,300	232	1,230,263	5,300
Oregon	0.38	16	124,180	7,700	15	114,627	7,700
Pennsylvania	1.19	72	385,881	5,300	67	356,197	5,300
Rhode Island	0.02	0	4,669	7,000	0	4,310	7,000
South Carolina	4.16	369	1,353,294	3,700	338	1,249,195	3,700
South Dakota	1.32	61	428,547	7,000	57	395,581	7,000
Tennessee	4.16	319	1,351,896	4,200	297	1,247,903	4,200
Texas	8.55	452	2,779,476	6,100	421	2,565,671	6,100
Utah	0.11	4	36,587	7,500	5	33,773	7,500
Vermont	0.09	5	27,863	5,400	5	25,720	5,400
Virginia	2.15	152	699,155	4,600	140	645,374	4,600
Washington	0.49	18	158,573	8,900	16	146,375	8,900
West Virginia	0.98	82	318,720	3,900	75	294,203	3,900
Wisconsin	1.64	81	534,093	6,500	76	493,010	6,500
Wyoming	0.14	5	46,461	8,900	5	42,887	8,900
Alaska	B		1,263			1,166	
Hawaii	0.85	68	277,866	4,100	63	256,492	4,100
Puerto Rico	1.81	159	588,978	3,700	147	543,672	3,700

B/ Less than 0.01 percent.

FIG. 1 DISTRIBUTION OF TENANT PURCHASE LOANS, BY SIZE OF LOAN, THROUGH JUNE 30, 1942

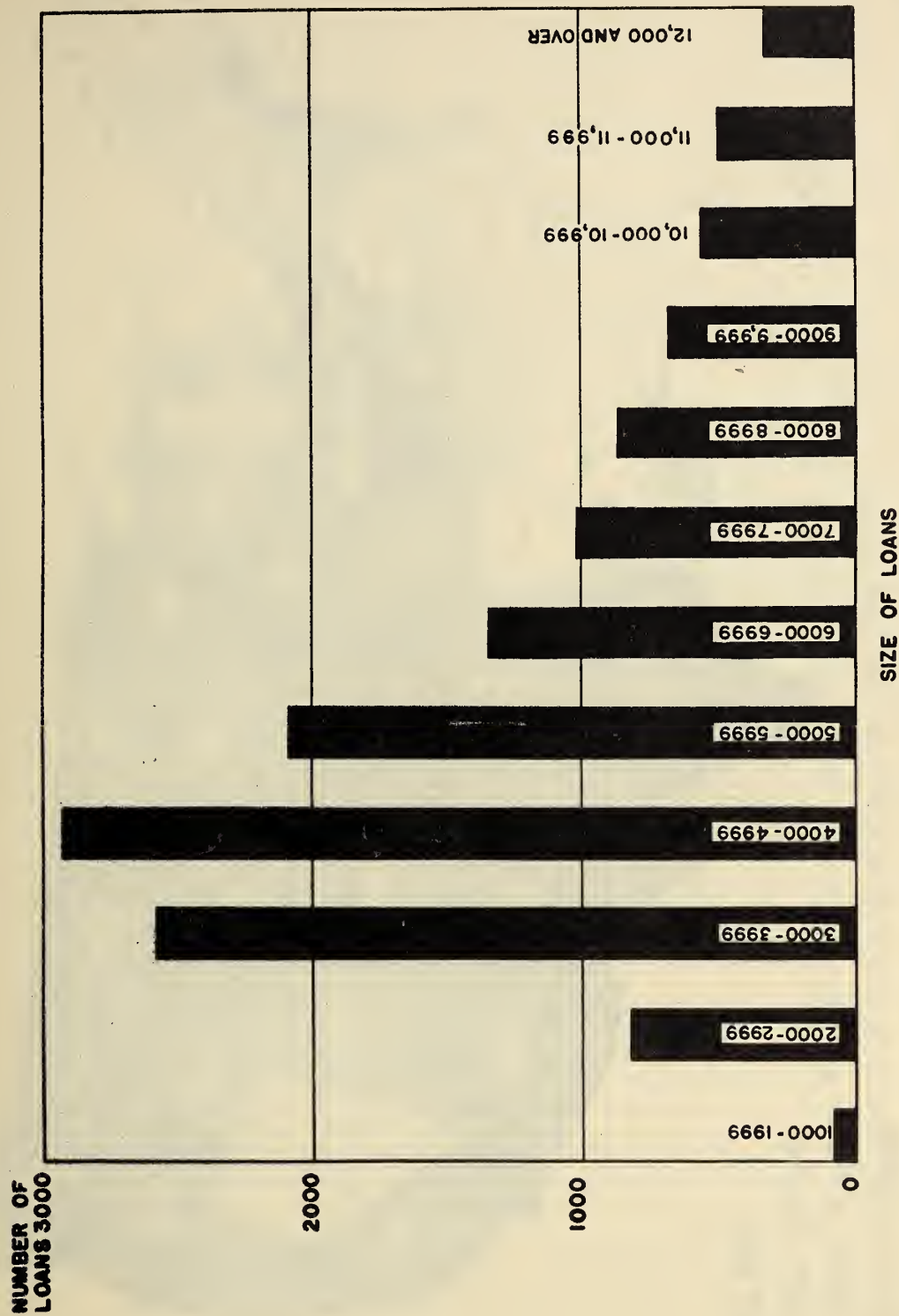


FIG. 2 AVERAGE SIZE OF TENANT PURCHASE LOAN FROM BEGINNING OF PROGRAM THROUGH JUNE 30, 1942

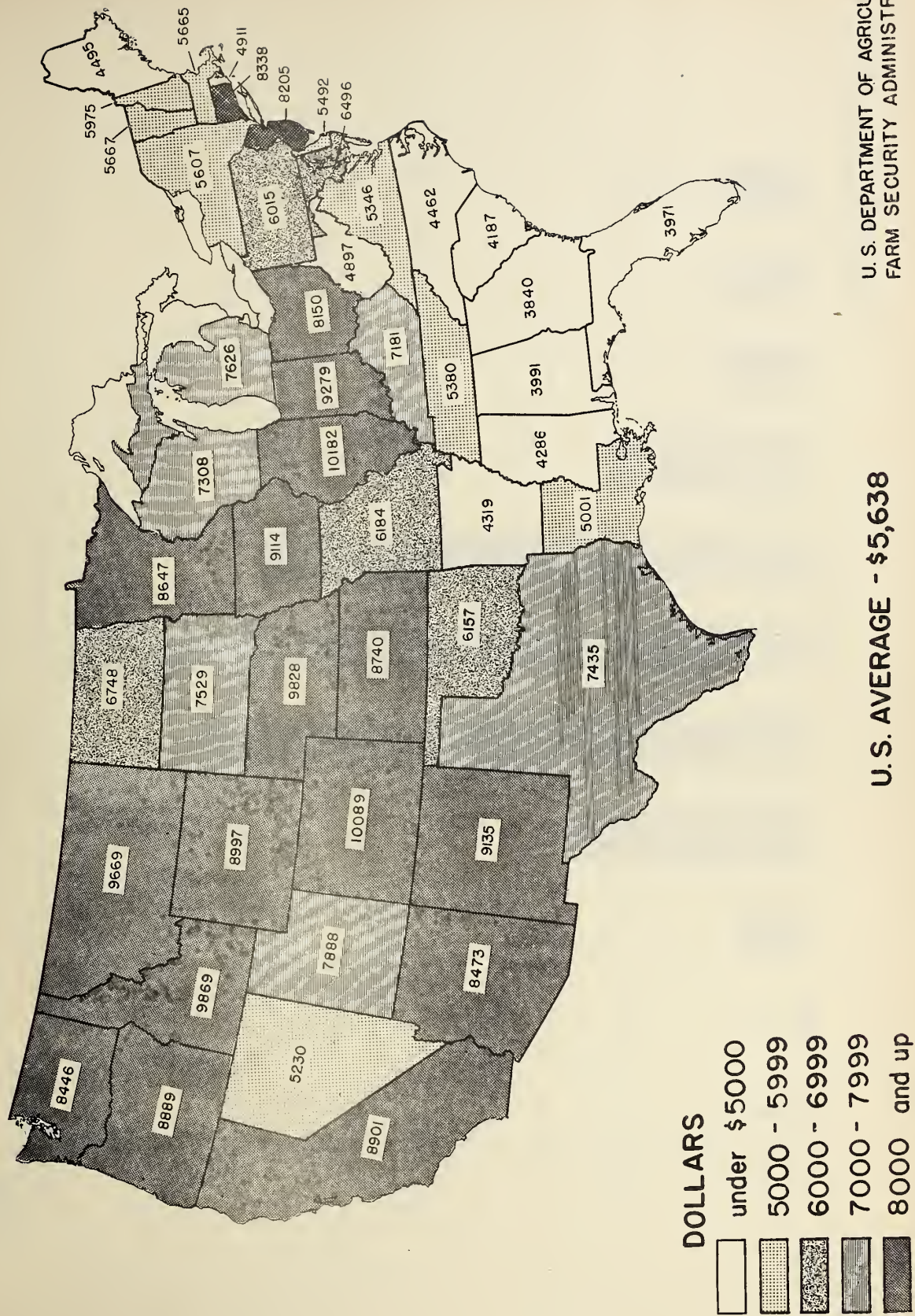
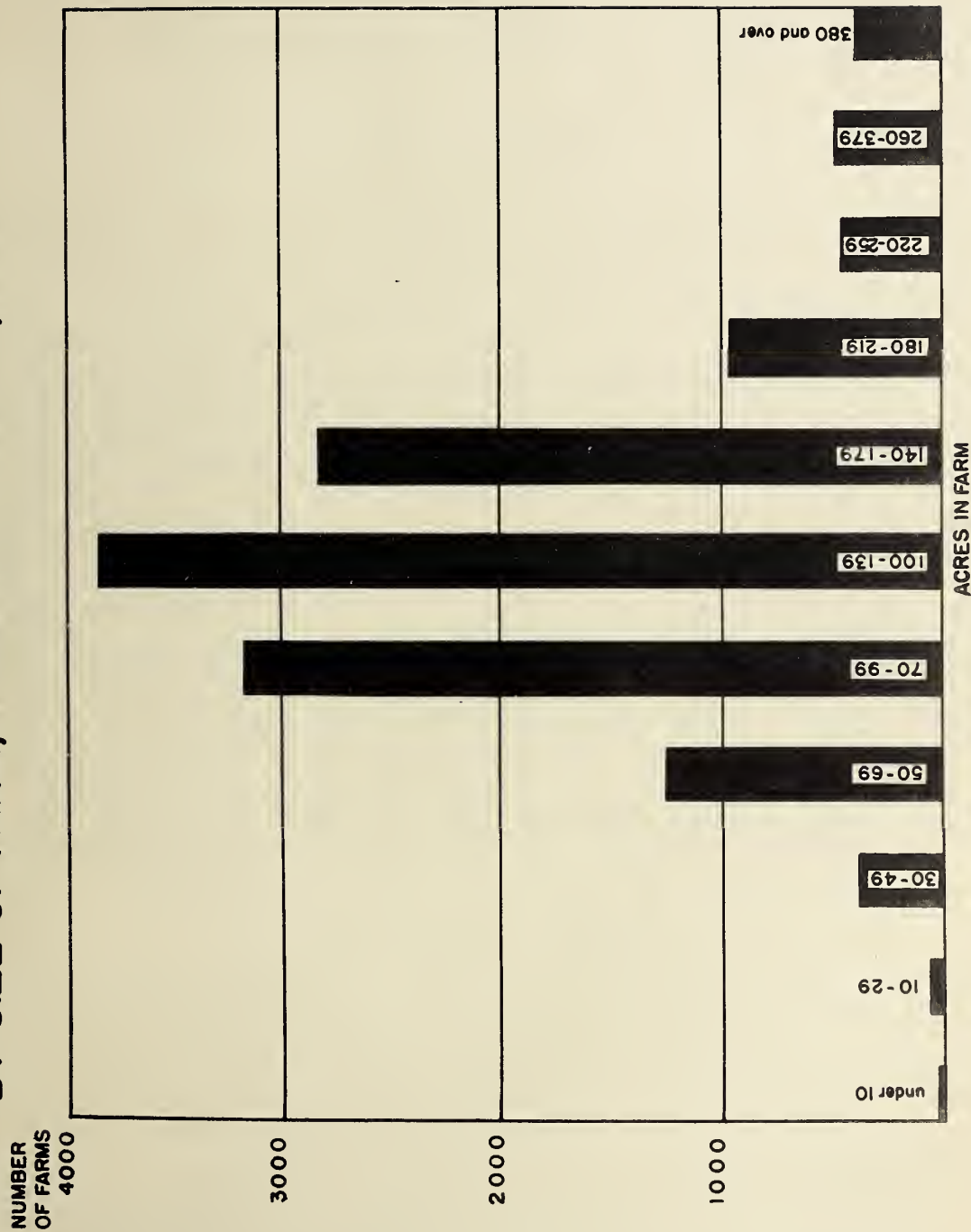


FIG3 DISTRIBUTION OF FARMS PURCHASED WITH TP LOANS,
BY SIZE OF FARM, THROUGH JUNE 30, 1942.



(f) LIQUIDATION AND MANAGEMENT OF RESETTLEMENT PROJECTS - TITLE IV

Appropriation Act, 1943	\$500,000
Proposed transfers in the 1944 estimates to other appropriations (see Budget schedule for details)	<u>-72,874</u>
Total available, 1943	427,126
Budget estimate, 1944	<u>421,039</u>
Decrease (including decrease of \$6,087 travel funds returned to surplus)	<u><u>-6,087</u></u>

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Technical services and supervision of land development and property maintenance	\$109,152	\$88,372	\$89,500	+\$1,128 (1)
2. Management and collection service	271,424	186,122	187,224	+1,102 (2)
3. Administrative expenses	225,083	140,687	140,475	-212
Covered into Treasury in accordance with Public Law 674	- -	6,087	- -	-6,087
Continuing allotments and transfers to other appropriations and Departments (see Budget schedule for details)	3,200	5,858	3,840	-2,018
Unobligated balance	65,720	- -	- -	- -
Total available	674,579	427,126	421,039	-6,087
Transfers in the estimates to other appropriations (see Budget schedule for details)	72,874	72,874	- -	- -
Total estimate or appropriation	747,453	500,000	421,039	

INCREASES AND DECREASES

The decrease of \$6,087 in this item for 1944 consists of the decrease in travel funds (returned to surplus in 1943). In addition, the following adjustments between projects are provided: A reduction of \$2,018 in expenses incurred by the Treasury Department in connection with this program for which funds are transferred from this appropriation, and a reduction of \$212 in administrative expenses are distributed to projects (1) and (2) as follows:

- (1) An increase of \$1,128 for increased cost of "Technical services and supervision of land development and property maintenance."
- (2) An increase of \$1,102 for increased "Management and collection service."

WORK UNDER THIS APPROPRIATION

Objective: To provide for the liquidation and management of resettlement projects by making provision for salaries and other expenses in connection with the managerial functions at the national and regional office levels in directing efforts toward the ultimate liquidation of the projects.

The Problem and its Significance: The basic problem in connection with the liquidation and management of resettlement projects is to effect certain necessary improvements and the reorganization of some units, presently too small to constitute an economic unit to support a family with reasonable standards of living, in order that all farming units may be adequate for the family living of the purchasers. Although considerable progress has been made in this direction, there is still a number of units which require adjustments in area, as well as improvements and betterments to the building. The changes in the size of the units will be made simply by rearrangement within the project acreage. The funds required for the improvements and betterments are being requested under the heading "Loans, Grants, and Rural Rehabilitation."

General Plan: Under this item, plans are developed and work directed toward sale of all projects on long-term contracts to individual clients or to homestead associations.

In accordance with Executive Order No. 9070, dated February 24, 1942, 42 non-farm projects, consisting of 5,382 units, heretofore under the jurisdiction of the Farm Security Administration have been transferred to the jurisdiction of the Federal Public Housing Authority of the National Housing Agency.

The estimate for the fiscal year 1944, in the amount of \$421,039, provides for the salaries and other expenses of the management functions at the national and regional office levels. It does not make provision for the direct project expenses of the 152 resettlement projects which remain under the jurisdiction of the Farm Security Administration.

The management, operation, and maintenance, including payments in lieu of taxes and insurance premiums in connection with the direct project operating expenses, have been provided from the receipts derived from the rental of project facilities. These receipts have been deposited into the appropriation "Payments in Lieu of Taxes and for Operation and Maintenance of Resettlement Projects." The funds available on July 1, 1943, under this appropriation, together with the income from the rental of the project facilities of the 152 projects during the fiscal year 1944, will continue to be utilized for the direct project expenses.

Examples of Progress and Current Program: Efforts are being made to dispose of project units as rapidly as clients progress to the point where they can undertake the purchases with a reasonable possibility of being successful. The following statement outlines the status of liquidation of the remaining projects as of June 30, 1942:

Status of liquidation of Projects as of June 30, 1942

Description	: Total Units	: Units Sold	: Units Being Operated under Lease
Community Projects	: 4,766	: 987	: 3,779
Subsistence Homesteads	: 464	: 387	: 77
Scattered Farms	: 4,842	: 1,751	: 3,091
Totals	: 10,072	: 3,125	: 6,947

In light of conditions as they exist at present, it appears that at least 75 per-cent of the total units will have been sold by June 30, 1944 either to individ-uals or to homestead associations. To expedite these sales, the amount of \$2,230 has been transferred to the work projects. "Technical services and supervision of land development and property maintenance" and "Management and Collection services" to assist clients in assuming responsibility and in im-proving their farm and home management practices.

As these units are sold, the revenue derived from the projects and made available under the appropriation "Payments in Lieu of Taxes and for Operation and Main-tenance of Resettlement Projects" will decrease for the next few years at a more rapid rate than can the cost of management and operation and maintenance of the projects. It is extremely important that these clients, during the earlier years of the purchase contract, be serviced carefully in order to assure their ultimate success.

Statements of the development costs of all projects and the operating expenses and income from the inception to June 30, 1942, exclusive of 42 non-farm projects transferred to Federal Public Housing Authority, are shown in Tables I and II, respectively.

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SECURITY ADMINISTRATION

Table I Statement of Project Development Based on Obligations to June 30, 1942

RECAPITULATION BY PROJECT TYPE

	Community Projects	Subsistence Homesteads	Scattered Farms	Total Projects
Acres Purchased				
Other Fed. Agencies	4,893	23,351		28,244
State Corporation	178,904		220,697	399,601
Emergency Relief	185,057	856	311,534	497,447
Total Acres	368,854	24,207	532,231	925,292
Land Cost				
Other Fed. Agencies	\$ 42,472.91	\$133,592.63	\$	\$ 176,065.54
State Corporation	3,525,733.78		3,960,283.85	7,486,017.63
Emergency Relief	5,474,881.06	36,119.03	11,980,643.08	17,491,643.17
Total Land	9,043,087.75	169,711.66	15,940,926.93	25,153,726.34
Other Development Cost				
Other Fed. Agencies	288,860.78	109,981.62	393.24	399,235.64
State Corporation	4,876,651.05	100,471.91	2,352,780.20	7,329,903.16
Emergency Relief	20,094,265.29	590,821.29	18,126,489.84	38,811,576.42
Total Development	25,259,777.12	801,274.82	20,479,663.28	46,540,715.22
Total Capital Investment	\$34,302,864.87	\$970,986.48	\$36,420,590.21	\$71,694,441.56

Table I Statement of Project Development Based on Obligations to June 30, 1942

COMMUNITY PROJECTS

Project name and county	Development period	Family units completed	Acreage	Land east			Other			Other development cost			Total investment
				State or- poration	Emergency relief	Total	Federal agencies	State or- poration	Emergency relief	Total	State or- poration	Emergency relief	
Alabama													
Geary Bond Farm, Wilcox	1937	101	10,188	123,805.23	77,644.99	201,450.22				123,805.23	150,109.27	134,250.00	284,159.27
Prairie Farm, Bacon	1936	34	3,169							27,036.46		123,290.90	150,327.36
Skyline Farm, Jackson	1936	181	13,185	96,122.91	68.20	96,191.11				581,288.54		579,551.22	1,160,839.76
Arizona													
Casa Grande Valley Farms, Pinal	1936	60	5,003	25,098.23	380,711.01	405,809.24				456,735.49	8,315.07		465,050.56
Arkansas													
Bacon Farm, Poinsett	1936	77	4,398	127,224.18	130,451.31	257,675.49				241,164.16			241,164.16
Chicot Farm, Chicot and Drew	1936	261	13,600	127,224.18	130,451.31	257,675.49				836,972.00	86,668.62		923,640.62
Clover Bond Farms, Lawrence	1936	93	4,995	154,500.10		154,500.10				344,969.49			344,969.49
Decher Farm, Decha	1936	7,582	7,582	37,911.55		37,911.55				6,801.43			6,801.43
Kelso Farm, Decha	1936	9	4,523	126,000.00		126,000.00				841,599.36			841,599.36
Lake Dick, Jefferson and Arkansas	1936	141	8,164	126,000.00		126,000.00				705,830.40			705,830.40
Lawton, Lee and Phillips	1936	20	5,851	126,000.00		126,000.00				1,243,710.77			1,243,710.77
Lonoke Farm, Lonoke	1936	20	5,851	126,000.00		126,000.00				1,243,710.77			1,243,710.77
Plum Bayou, Jefferson	1936	88	3,956	122,000.00		122,000.00				379,197.05			379,197.05
St. Francis River Farm, Poinsett	1936	8	1,921	80,360.00		80,360.00				97,477.50			97,477.50
Thomas Farm, Crittenden	1936	57	2,224	80,360.00		80,360.00				16,226.80			16,226.80
Truman Farm, Poinsett	1936	57	2,224	80,360.00		80,360.00				16,226.80			16,226.80
Florida													
Escambia, Okaloosa	1935	81	13,073	1,800.00	62,846.20	64,646.20				498,007.55			498,007.55
Georgia													
Yonkersville, Irwin	1934	105	12,750	166,726.31		166,726.31				612,830.04			612,830.04
Bright Patch Farm, Putnam	1934	22	7,456	58,539.45		58,539.45				125,667.35			125,667.35
Pilot River Farm, Macon	1934	116	12,634	260,128.20		260,128.20				244,984.83			244,984.83
Wolf Creek, Grady	1934	24	2,249	26,435.97		26,435.97				113,027.75			113,027.75
Idaho													
Farmington, Blaine	1936	66	583	51,200.00		51,200.00				390,186.14			390,186.14
Louisiana													
Monroe Farm, Madison and East Carroll	1936	119	11,896	290,066.40		290,066.40				577,656.72			577,656.72
Terrebonne, Terrebonne	1936	73	6,247	115,178.60		115,178.60				382,787.92			382,787.92
Transylvania Farm, East Carroll	1936	163	9,702	329,271.50		329,271.50				544,132.61			544,132.61
Michigan													
Saginaw Valley Farm, Saginaw	1936	33	8,925	269,255.45		269,255.45				58,932.06			58,932.06
Minnesota													
Albert Lea Homesteads, Freeborn	1934	14	80	11,300.00		11,300.00				42,015.25			42,015.25
Mississippi													
Blind Farm, Hinds	1936	91	5,413	62,470.93		62,470.93				14,570.63			14,570.63
Greenbush Farm, George and Greens	1936	83	5,714	137,743.27		137,743.27				28,840.56			28,840.56
Alton Farm, Holmes	1936	110	9,350	241,998.72		241,998.72				241,175.75			241,175.75
Missouri													
LaForge Farm, New Madrid	1936	101	6,706	315,027.40		315,027.40				628,447.61			628,447.61
Montana													
Kinsay Flats, Custer	1936	80	20,818	109,604.85		109,604.85				515,509.15			515,509.15
Nebraska													
Fairbury Farmsteads, Jefferson	1934	11	163	13,750.00		13,750.00				13,742.46			13,742.46
Falls City Farmsteads, Richardson	1934	10	153	53,762.00		53,762.00				48,010.20			48,010.20
Grand Island Farmsteads, Hall	1934	10	153	11,083.00		11,083.00				11,540.70			11,540.70
Keary Farmsteads, Phillips	1934	10	132	40,963.00		40,963.00				48,841.40			48,841.40
Loop City Farmsteads, Sherman	1934	11	792	33,842.00		33,842.00				5,949.06			5,949.06
South Sioux City Farmsteads, Dakota	1934	22	613	88,106.40		88,106.40				113,589.15			113,589.15
Two Rivers, Douglas and Saunders	1934	22	299	17,042.60		17,042.60				78,796.93			78,796.93
New Mexico													
Boque Farm, Valencia	1935	42	2,421	80,087.52		80,087.52				13,777.82			13,777.82
Donna Ann, Dona Ana	1935	5	207	20,690.00		20,690.00				15,259.23			15,259.23
North Carolina													
Farmsteads, Robeson	1936	75	9,297	18,700.00		18,700.00				295,895.84			295,895.84
Pender Farmsteads, Pender	1936	95	9,883	54,662.55		54,662.55				1,729,078.31			1,729,078.31
Ronoke Farm, Halifax	1936	311	18,032	6,809.98		6,809.98				485,441.58			485,441.58
Sepperson Farm, Tyrrell and Washington	1936	127	11,309	13,500.00		13,500.00				55.00			55.00
North Dakota													
Burlington Project, Ward	1934	35	2,794	51,493.82		51,493.82				161,373.49			161,373.49
South Carolina													
Asheburg Plantation, Lee	1935	161	11,507	298,746.76		298,746.76				1,272,465.43			1,272,465.43
Orangeburg Farm, Calhoun and Orangeburg	1936	80	8,007	129,676.55		129,676.55				332,420.93			332,420.93
Tennessee													
Riverton Farm, Sumter	1939	29	1,767	13,800.00		13,800.00				71,775.81			71,775.81

Project name and county	Development period Started/Completed	Family units Completed	Acres	Land cost			Emergency relief	Other development cost			Total capital investment
				Other Federal agencies	State contribution	Federal agencies		State contribution	Emergency relief	Total	
South Dakota Stonx Falls, Minnehaha	1936	14	821	99,000.00		99,000.00		43,156.99	76,771.24	119,927.83	218,927.83
Texas Neogoches Farms, Neogoches	1940	1	2,169	60,000.00		60,000.00		20,938.32	15,089.11	20,938.32	80,938.32
Reposville Farms, Hockley	1934	76	16,823	320,286.12		320,286.12		332,702.19	346,391.30	346,391.30	668,677.12
Sabine Farms, Harrison & Pencil	1936	80	7,986	72,073.91		72,073.91		13,085.35	347,287.70	347,287.70	419,361.61
Sam Houston Farms, Harris	1936	86	4,979	175,263.38		175,263.38		291,164.87	439,398.16	439,398.16	614,661.83
Wickliffe Valley Farms, Wichita	1934	91	5,504	85,314.42		85,314.42		4,928.58	717,816.69	722,745.27	988,733.94
Woodlake Community, Woodlake	1934	101	7,210	139,195.05		139,195.05		495,743.20	36,507.95	532,251.15	651,446.20
McLennan Farm, McLennan	1940	20	2,724	228,434.19		228,434.19		16,011.55		16,011.55	244,445.74
Virginia Stonewall Homesteads, Greene and 4	1936	160	6,891	10,287.60		10,287.60		734,011.66	734,011.66	734,011.66	1,043,344.16
Wisconsin Drummond Project, Bayfield	1936	32	81	830.00		830.00		247,116.61	247,116.61	247,116.61	247,948.61
Monroe County Retirement Homesteads, Harrison Pine Retirement Homesteads, Forest & 2	1937	6	53	2,660.00		2,660.00		12,957.14	2,990.64	15,947.78	18,507.78
West Bend Farms, Washington	1937	9	8	920.00		920.00		19,198.37		19,198.37	20,118.37
		2	68	7,038.84		7,038.84		21.27		21.27	7,060.11
Total community projects		4,766	368,854	3,525,733.78	5,174,881.06	9,043,087.75	288,860.78	4,876,651.05	20,094,265.29	25,259,777.12	34,382,884.87
SUBSISTENCE HOMESTEADS											
Florida Jacksonville Homesteads, Duval		0	174			18,513.66		274.89	534.32	809.21	19,322.87
Georgia Fleming Homesteads, Jasper	1938	50	15,269	88,187.32		1,006.34		49,809.62	431,584.92	561,866.45	651,360.11
Illinois Southern Illinois Homesteads, Franklin		0	912	10,350.00		16,599.03		37,718.34	5,012.66	42,731.00	69,680.03
Mississippi Hobson Homesteads, Perry	1937	26	7,751	23,259.00		23,259.00		21,947.82	170,393.13	192,340.95	215,959.95
Oklahoma Tulsa County Homesteads, Tulsa		1	101	11,496.31		11,496.31		230.95	3,296.26	3,527.21	15,023.52
Total subsistence homesteads		77	24,207	133,592.63		36,119.03		109,981.62	590,821.29	801,274.82	970,986.48
SCATTERED FARMS											
Alabama Alabama Farm Tenant Security, Autauga and 17	1936	96	11,121	5,000.00		236,122.79		213,122.79	316,512.71	346,194.64	587,617.43
Alabama Scattered Farms, Clay and 17	1936	28	7,717	8,150.00		521,123.12		107,198.11	1,082,500.29	1,372,170.54	1,683,593.68
Alabama Scattered Farms, Coffee and 5	1936	299	55,259	521,123.12		521,123.12		289,970.25			1,683,593.68
Alabama West Central Alabama Farms, Greene and Tuscaloosa		0	157	1,200.00		1,200.00		4,332.00		4,332.00	5,582.00
Arkansas Arkansas Farm Tenant Security, Clark and 3	1936	67	4,508	146,739.00		146,739.00		366,598.56	366,598.56	513,297.56	513,297.56
Arkansas Central and West Arkansas Valley Farms, Conway and 9	1936	85	7,347	98,201.62		154,981.83		204,108.52	204,108.52	359,390.35	359,390.35
Arkansas Northwest Arkansas Farms, Benton and Washington	1936	44	3,131	108,712.00		108,712.00		105,608.60	105,608.60	211,300.60	211,300.60
California Hendocino Resettlement Project, Hendocino and Santa Cruz	1936	4	165	14,025.00		14,025.00		11,150.00		11,150.00	25,175.00
Colorado Colorado Scattered Farms, Mesa and 16	1939	1	16	1,102.00		1,102.00		1,000.00		1,000.00	2,102.00
Colorado La Junta Farms, Las Animas and 159	1939	0	159	1,750.00		1,750.00		8.60		8.60	1,758.60
Colorado San Luis Valley Farms, Alamosa and Rio Grande	1936	86	9,475	106,040.25		199,290.25		408.05	878,031.09	878,170.94	1,075,763.36
Colorado Western Slope Farms, Delta, Mesa, and Montrose	1936	103	7,350	76,890.00		361,741.95		71,455.81	713,079.25	785,135.06	1,146,877.01
Florida Florida Scattered Farms, Jefferson and 2	1936	69	8,138	100,695.12		100,695.12		227,864.35	65,600.00	293,464.35	394,159.47
Georgia Georgia Farm Tenant Security, Barrow and 32	1936	106	11,003	222,250.31		222,250.31		47,610.94	404,719.68	452,330.56	674,610.87
Georgia Georgia Scattered Farms, Randolph and Polk	1934	7	1,069	17,717.76		17,717.76		6,712.17		6,712.17	24,430.23
Greene County Project, Greene	1939	125	19,193	198,865.00		198,865.00		112,563.82		112,563.82	311,428.82

Project name and county	Development period	Family units	Acreage	Land cost			Other Federal agencies	Other development cost			Total capital investment
				State or- pation	Emergency relief	Total		State or- pation	Emergency relief	Total	
IDAHO											
Boundary Farms, Boundary	1936	37	8,104		324,717.27	324,717.27			\$163,693.70	\$163,693.70	\$788,140.97
Idaho Scattered Farms, Ida and 16	1934	87	1,279	109,793.00		109,793.00		86,131.49		86,131.49	195,921.49
INDIANA											
Wabash Farms, Davises and 6	1936	122	7,531		528,690.80	528,690.80		81,062.87	631,678.19	712,741.06	1,241,431.96
Rehabilitation Demonstration Farms, RIPLEY and Jefferson	1936	2	361	6,385.00		6,385.00		422.74		422.74	6,807.74
KANSAS											
Scattered Farms, Jackson and 3	1939	7	1,036	43,925.00		43,925.00		23,080.44		23,080.44	67,005.44
Northeastern Kansas Farms, Jackson and 3	1935	26	1,758	151,695.11		151,695.11		91,697.44		91,697.44	243,392.55
KENTUCKY											
Christian-Frigg Farms, Christian	1936	106	8,296		427,897.67	427,897.67		543,531.66		543,531.66	971,429.33
LOUISIANA											
Louisiana Farm Tenant Security, Bossier and 9	1936	111	7,166	22,422.00		233,540.67		388,713.84		388,713.84	622,234.51
MAINE											
State of Maine Farms, Androscoggin and 12	1936	66	7,029	139,150.00		139,150.00		211,514.46		211,514.46	380,664.46
MICHIGAN											
Al-Salis Farms, Oshtemo	1937	1	4,436	18,786.06		18,786.06		2,263.82		2,263.82	21,049.88
Chaboyan Farms, Chaboyan	1939	3	283	7,540.00		7,540.00		8,318.11		8,318.11	15,858.11
Corporation Farms and Real Estate, Astoria and 8	1936	18	911	28,513.38		28,513.38		18,081.74		18,081.74	46,595.12
Johannesburg Farms, Oshtemo and 11	1936	15	1,598		49,820.00	49,820.00		34,923.21		34,923.21	84,743.21
Potato Warehouses, Iron and Alger	1936	10	1	101.00		101.00		33,167.17		33,167.17	33,568.17
Southern Michigan Farms, Ionia and 9	1936	73	6,419		329,538.00	329,538.00		225,055.31		225,055.31	554,593.31
MINNESOTA											
Beltrami-Jaland Farms, Beltrami and 13	1935	214	25,011	156,718.11		156,718.11		1,432.11		1,432.11	193,654.12
Central Minnesota Farms, Pope and 6	1936	106	15,112		730,185.00	730,185.00		303,361.66		303,361.66	1,033,816.66
Ethan Allen, Itasca	1936	4	640	8,200.00		8,200.00		5,500.00		5,500.00	13,700.00
Minnesota Scattered Farms, Becker and Renville	1936	3	165	978.00		978.00		3,000.00		3,000.00	3,978.00
Thief River Falls Farms, Marshall and 2	1936	111	17,104		272,690.00	272,690.00		676,551.67		676,551.67	949,241.67
MISSISSIPPI											
Mississippi Farm Tenant Security, Bolivar and 3	1936	303	15,138		772,674.33	772,674.33		1,049,366.24		1,049,366.24	1,822,040.57
Mississippi Rehabilitation Farms, Lawrence	1936	0	80	220.00		220.00		65.19		65.19	285.19
Northeast Mississippi Farms, Oktibeha and 6	1936	118	9,277		110,291.26	110,291.26		412,072.08		412,072.08	552,363.34
MISSOURI											
Orange Farms, Pettis	1936	86	8,686		425,005.60	425,005.60		36,762.69		36,762.69	965,226.37
Rehabilitation Demonstration Farms, Boone and 25	1935	45	4,572	91,349.00		91,349.00		57,814.72		57,814.72	119,163.72
MONTANA											
Fairfield Bench Farms, Teton and Cascade	1936	129	12,722		425,677.30	425,677.30		733,894.21		733,894.21	1,159,571.51
Milk River Farms, Blaine and 2	1934	163	19,128	19,200.00		360,691.50		25,113.98	1,647,842.66	1,673,379.88	2,034,071.38
NEBRASKA											
Republican Valley Farmsteads, Harlan	1936	1	88	7,000.00		7,000.00		154.19		154.19	7,154.19
NEW MEXICO											
El Publico Grating Project, San Miguel	1936	0	26,164	58,910.00		58,910.00		20,358.27		20,358.27	79,268.27
New Mexico Farms, De Baca	1936	22	1,114	69,973.32		69,973.32		119,447.50		119,447.50	189,420.82
New Mexico Scattered Farms, De Baca	1940	2	116	4,623.10		4,623.10		13.50		13.50	4,636.60
Silver City Farms, Grant	1940	4	352	8,441.00		8,441.00		13,107.05		13,107.05	21,548.05
NEW YORK											
Finger Lakes Farms, Cayuga and 4	1936	55	5,742	181,815.00		181,815.00		251,700.32		251,700.32	433,515.32
New York Valley Farms, Allegany and 8	1936	34	3,696	133,718.00		133,718.00		139,494.30		139,494.30	273,212.30

Project name and county	Development period	Family units	Acreage	Land cost				Other development cost				Total	Total capital investment
				Other Federal agencies	State contribution	Emergency relief	Total	Other Federal agencies	State contribution	Emergency relief	Total		
NORTH CAROLINA													
North Carolina Farm Tenant Security, Wayne and 4	1936	96	7,321				282,158.35				\$271,117.36	\$271,117.36	\$953,933.71
North Carolina Scattered Farms, North Carolina	1936	41	7,205				87,523.64				87,523.64	87,523.64	174,653.13
Wolf Pit Farm, Richmond	1936	33	4,120				157,395.99				117,097.52	117,097.52	274,469.51
NORTH DAKOTA													
North Dakota Scattered Farms, McLean and 3	1936	2	373		8,703.92		8,703.92				3,337.76	3,337.76	12,041.68
Red River Valley Farms, Cass and Towner	1936	110	28,013		895,017.00		519,148.75				544,554.71	544,554.71	1,408,709.89
OHIO													
Scioto Farms, Ross and 3	1936	130	12,236		384,510.00		676,780.25				825,295.87	889,660.90	1,990,951.15
OKLAHOMA													
Marion Oklahoma Farms, Catoe and 3	1936	78	7,950		96,550.00		282,113.63				274,210.29	274,210.29	653,218.92
101 Ranch Farms, Payne and 3	1936	40	8,897		164,600.00		278,919.15				203,114.02	203,114.02	617,013.17
Oklahoma Farm Tenant Security, Garvin and 7	1936	55	8,579		76,631.40		272,916.26				209,341.82	209,341.82	558,912.18
OREGON													
Taylor Farms, Polk and 2	1936	104	6,104				537,614.72				775,919.09	775,919.09	1,313,533.81
PENNSYLVANIA													
Northampton Farms, Northampton	1936	6	737				104,280.00				114,954.86	114,954.86	119,234.86
Pennsylvania Farms, Bradford and 8	1936	37	3,795				111,300.00				120,091.06	120,091.06	261,391.06
SOUTH CAROLINA													
South Carolina Farm Tenant Security, Allendale and 8	1937	117	1,395		209,397.32		182,089.59				387,600.10	387,600.10	600,253.20
South Carolina Farm Tenant Security, Aiken and 13	1936	55	6,509				32,350.90				36,088.97	36,088.97	146,913.57
South Carolina Scattered Farms, Union and 4	1934	22	1,544										68,139.87
SOUTH DAKOTA													
South Dakota Farms, Brookings and 2	1936	39	5,988		58,300.00		195,359.10				114,101.15	166,173.19	420,132.59
Spearsfish, Lawrence	1937	2	2,031		30,000.00		30,000.00				2,233.51	2,233.51	32,233.51
TENNESSEE													
Goodfittville, Davidson	1936	0	176		15,360.00		15,360.00				15,360.00	15,360.00	15,360.00
Tennessee Farm Tenant Security, Garwell and 4	1936	112	10,784		174,184.80		170,195.78				163,116.57	559,602.35	903,982.93
TEXAS													
Fannin Farms, Fannin	1936	38	14,252				108,908.94				160,787.98	160,787.98	269,696.92
Mexia Colony, Limestone	1936	0	1,275		60,500.00		60,500.00				10,533.11	10,533.11	71,033.11
Texas Farm Tenant Security, Collins and 15	1936	111	12,027		60,500.00		528,074.17				161,724.19	161,724.19	989,825.36
UTAH													
Traylor Valley Farms, Garfield and 5	1936	18	1,269		9,960.75		81,036.28				69,960.15	70,010.15	161,007.18
Wadsworth Resettlement Project, Garfield and 4	1936	14	1,690		66,820.00		66,820.00				3,090.00	21,074.00	87,894.00
VIRGINIA													
Colonial Acres, Matthews and 2	1936	0	181								113.10	113.10	14,555.14
WASHINGTON													
Shobomush Farms, Shobomush and 2	1936	144	2,739				299,101.84				197,668.24	197,668.24	197,070.08
Washington Scattered Farms, Shobomush and 19	1934	129	5,839				152,554.00				132,851.88	132,851.88	285,105.88
WISCONSIN													
Central Wisconsin Farms, Clark and 3	1936	73	6,782		354,100.00		354,100.00				190,799.34	190,799.34	544,899.34
Lakewood-Cranden Farms, Bayfield and 3	1936	24	2,076		62,175.00		62,175.00				82,116.50	82,116.50	144,610.50
Langlade and Onida Project, Langlade and Onida	1936	0	14,159		21,919.56		21,919.56				24.17	24.17	21,914.03
Wisconsin Scattered Farms, Monroe and 3	1936	5	200		4,350.00		4,350.00				5,062.98	5,062.98	9,112.98
Valeau Corporation, Forest	1936	0	15		600.00		600.00						600.00
Total scattered farms		1,812	532,231		3,960,283.85		11,980,613.08				2,352,780.20	20,117,663.28	36,120,590.21

* Includes minor development during fiscal year 1942 from Farm Security Administration funds.



Table 7 Statement of Project Operating Cost and Income as of June 30, 1942

COMMUNITY PROJECTS

Project	Management	Operation and Maintenance	Taxes	Insurance	Other Operating Costs	Total Operating Cost 6/30/42	Income to 6/30/42
Alabama							
Covert Wood Farm	\$ 34,280.07	\$ 3,435.77	\$ 2,939.79	\$ 4,485.45	\$ 3,289.32	\$ 18,180.40	\$ 2,096.94
Prentiss Farm	26,344.01	3,475.95	719.20	1,531.42	648.27	35,108.97	9,860.00
Skylino Farm	83,249.66	44,615.88	2,791.02	8,059.93		139,344.76	26,816.99
Arizona							
Casa Grande Valley Farms	39,377.80	17,276.64	28,475.16	3,891.63	358.12	89,379.35	87,623.89
Arkansas							
Waco Farm	39,636.51	3,934.65	5,561.10	4,827.87		55,329.55	40,215.89
Waco Farm	34,279.16	7,561.50	29,922.60	6,227.22	1,369.42	71,869.40	6,733.92
Chicot Farm	39,504.29	11,017.69	7,300.17	6,497.24	19,876.82	64,319.39	53,668.19
Clover Bend Farm	31,588.25	7,645.86	7,892.41	5,843.77	1,300.95	54,211.24	44,433.94
Dennis Farm	1,704.96	15,543.22	15,543.22			17,248.18	65,057.27
Lake Dick	41,919.26	25,196.70	11,099.44	9,870.21	1,744.79	69,790.40	82,862.11
Lakeview Farm	72,401.52	31,969.50	15,694.60	7,312.05	3,734.08	131,111.75	23,729.73
Lone Star Farm	23,154.17	6,517.81	4,633.93	3,336.67		37,644.58	94,836.83
Plum Bayou	71,116.09	48,195.96	22,733.13	18,594.57	89,555.75	250,195.39	56,203.51
St. Francis River Farms	13,644.09	6,076.06	32,056.38	3,447.67	7,160.15	62,334.35	11,677.56
Thomas Farm	12,664.39	316.22	4,120.65			17,101.26	
Trumann Farm	22,991.23	5,214.62	18,928.44	4,047.22	6,645.44	57,822.00	113,966.62
Florida							
Escambia	39,162.92	16,917.51	4,701.98	4,382.07		65,164.48	7,140.99
Georgia							
Irwinville	60,808.96	34,249.89	9,842.87	5,633.77	1,324.78	111,860.27	68,024.44
Briar Patch Farm	18,485.35	3,327.34	3,327.34	953.48		28,108.03	26,102.03
Pilot River Farm	45,093.47	1,860.44	5,536.43	7,484.66	595.76	60,570.76	27,203.23
Wolf Creek	30,269.27	5,081.95	2,920.06	1,669.09		39,940.37	11,985.07
Kentucky							
Sublimity Forest Community	6,659.51	11,151.75	1,277.43		122.41	19,211.10	21,039.50
Louisiana							
Round Farm	25,467.44	2,025.03	18,708.10	2,012.06	108.76	48,321.09	19,480.35
Terrebonne	31,707.34	5,934.42	12,895.07	5,283.15	325.93	47,000.08	1,224.13
Transylvania Farms	33,691.88		17,176.26	2,280.98		59,083.24	63,703.25
Michigan							
Saginaw Valley Farms	25,622.27	36,556.91	4,333.80	2,062.31	3,606.83	72,162.12	87,988.77
Minnesota							
Albert Lea Homesteads				665.20		665.20	2,520.59
Mississippi							
Hinds Farm	42,182.25	3,845.40	4,027.98	4,411.30	7.50	52,074.03	16,148.67
Lucedale Farm	28,740.72	9,056.50	10,079.41	5,283.15	7.50	66,601.31	56,792.22
Mileston Farm		1,354.99	29,834.54	290.02		60,227.77	8,133.85
Missouri							
LaForge Farm	42,005.84	26,603.04	21,841.54	10,008.07	3,207.41	103,665.90	101,800.28
Montana							
Kinsey Flats	38,384.31	800.09				39,184.40	33.56
Nebraska							
Fairbury Farmsteads	5,082.42	5,627.08	943.53	1,192.66		12,845.69	5,328.94
Falls City Farmsteads	3,340.15	1,412.02	1,412.02	1,306.47		8,808.72	1,523.42
Grand Island	3,386.57	1,222.25	1,112.60	1,112.60		9,067.68	7,280.15
Kearney Farmsteads	3,447.44	3,196.78	3,069.67	1,069.67		14,187.07	9,236.61
Loup City Farmsteads	3,636.72	4,249.22	1,274.70	1,383.55		13,544.19	3,737.69
Scottsbluff Farmsteads	23,443.31	11,692.35	8,587.35	3,337.99	1,104.83	48,295.81	7,094.34
South Sioux City Farmsteads	7,705.08	4,563.35	3,046.51	2,286.72		17,567.64	10,765.55
Two Rivers	37,425.51	14,804.36	14,163.38	7,966.99	38,336.18	112,695.44	35,538.28
New Mexico							
Bonnie Farms	62,248.03	22,518.24	36,217.35	2,987.87	51,601.30	175,572.79	51,128.41
Dora Ana	35.00	55.00	2,179.55	190.40		2,459.93	4,301.46

Project	Community Projects (Continued)				Total Operating Cost 6/30/12	Income 6/30/12
	Management	Operation and Maintenance	Taxes	Insurance		
North Carolina Farmsteads Rounsle Farms Souppernong Farms	\$ 34,999.12 141,775.11 98,113.70 53,428.71	\$ 12,764.05 64,897.43 13,351.33 20,166.05	\$ 13,176.61 19,113.95 20,891.10 19,377.32	\$ 4,935.13 20,598.17 16,632.72 4,054.19	\$ 65,979.51 144,997.64 2,368.75 97,100.27	\$ 41,611.59 17,616.82 123,914.48 23,517.81
North Dakota Burlington Project	12,433.86	14,180.82	1,111.00	1,819.66	29,545.34	10,954.96
South Carolina Ashwood Plantation Orangeburg Farms Tiverton Farms	115,887.64 15,491.70 9,630.37	73,395.94 4,005.76 615.72	39,381.84 7,855.13 571.95	10,611.72 3,238.22 1,318.63	1,539.50 584.03	95,877.02 20,788.05 4,272.50
South Dakota Sioux Falls	16,726.81	6,775.51	4,695.97	2,593.68	9,610.10	17,070.71
Texas McGoughs Farms Noperville Farms Spartan Farms Wheatman Farms Whitely Valley Farms Woodlake Community	7,505.10 30,837.14 12,138.24 49,112.09 2,124.11 66,791.12 85,992.26	14,771.71 17,853.82 6,915.60 25,850.37 136.14 23,034.61 20,548.52	110.87 11,630.74 2,137.82 10,573.31 1,893.70 54,181.34 6,131.75	248.79 1,544.94 4,398.77 4,265.62 713.38 7,074.20 7,621.68	335.65 2,111.11 11,693.29 5,112.33 3,419.72 811.48	67,803.23 7,994.10 21,788.82 10,523.07 50,734.99 12,113.43
Virginia Shenandoah Homesteads	77,072.01	21,906.84	16,142.78	10,442.91	8,690.83	31,438.45
Wisconsin Brumond Project Monroe County Retirement Homesteads Northern Pine Retirement Homesteads West Bend Farm	9.90 77.01	11,670.19 49.30	572.62 1,945.21 117.56	540.80 404.70	111.99	16,771.83 1,609.75 2,345.58 5,127.00
Total Community Projects	\$2,134,477.42	\$ 830,806.65	\$ 666,007.83	\$253,012.89	\$ 1,255,851.36	\$ 2,018,290.40
SUBSISTENCE HOMESTEADS PROJECTS						
Florida Jacksonville 1/						
Georgia Fiddmont Homesteads	49,542.80	20,724.11	6,566.46	4,242.05	24,504.71	13,199.24
Illinois Southern Illinois Homesteads	12,271.54					924.67
Mississippi Richmon Homesteads	26,591.28	5,420.03	4,121.87	1,127.35	14,559.10	4,517.19
Oklahoma Tulsa County Homesteads	1,731.84	203.21		77.09		848.25
Total Subsistence	\$ 90,110.46	\$ 26,347.65	\$ 10,688.33	\$ 5,446.49	\$ 39,063.81	\$ 19,189.35
SCATTERED FARMS PROJECTS						
Alabama Alabama Farm Tenant Security Alabama Scattered Farms Coffee Farms West Central Alabama Farms	24,744.20 50.00 151,686.31	17,956.62 5,695.50 48,994.73	4,174.38 2,087.63 30,663.69 21.75	3,658.14 1,208.96 16,832.79	50,533.34 9,042.09 1,331.12	56,440.60 17,605.27 167,691.85
Arkansas Arkansas Farm Tenant Security Central & Western Arkansas Valley Farms Northwest Arkansas Farms	43,964.69 50,407.54 37,462.09	21,239.54 8,440.32 5,390.69	7,084.88 6,809.65 4,127.98	3,746.68 5,153.46 2,754.27	226.27 4,663.96 122.90	51,423.24 25,049.46 11,556.55
California Kendallino Resettlement Project	21.56			157.16		2,312.53
Colorado Colorado Scattered Farms Las Animas Farms 1/ San Luis Valley Farms Western Slope Farms	65,849.36 76,900.74	27,378.26 30,627.08	33,281.13 88,243.31	7,170.23 9,619.12	6,337.50 6,920.98	9,949.16 73,107.44
Florida Florida Scattered Farms	24,270.46	11,496.67	4,674.50	4,287.42		28,872.93

Scattered Farms Projects (Continued)						Income to 6/30/42	
Project	Management	Operation and Maintenance	Taxes	Insurance	Other Operating Cost	Total Operating Cost 6/30/42	
Georgia Georgia Farm Tenant Security Georgia Scattered Farms Greene County Project	26,938.39 20.00 375.00	10,914.80 9,984.06	6,343.21 1,232.90 1,679.00	6,803.65 138.74 311.00		51,000.05 1,391.64 15,812.06	38,979.32 2,807.33 7,479.44
Idaho Boundary Farms Idaho Scattered Farms	35,459.65 227.42	25,027.91 505.64	18,556.20 8,231.49	3,910.18 1,679.85	19,631.32	102,785.26 10,844.40	28,103.48 8,077.66
Indiana Wetzel Farms Rehabilitation Demonstration Farms	65,980.19 132.62	49,064.78	38,945.86	10,202.25 2.16	14,831.79	179,024.87 134.78	73,260.05 97.79
Kansas Kansas Scattered Farms Northeastern Kansas Farms	30.00 12,862.65	642.00 3,629.56	1,217.49 10,001.38	1,012.21 2,886.68	1,846.99	2,901.70 31,227.26	2,586.23 12,580.26
Kentucky Christian-Trigg Farms	57,317.15	20,062.37	21,637.73	11,491.03	944.92	111,423.20	72,900.89
Louisiana Louisiana Farm Tenant Security	71,200.76	19,123.13	24,537.93	6,681.66	110.70	121,654.18	55,727.48
Maine State of Maine Farms	31,108.44	8,506.39	29,462.81	1,689.04		70,766.68	13,224.48
Michigan An Sable Area Cheboygan Farms Corporation Farms and Real Estate Johannesburg Farms Potato Warehouses Southern Michigan Farms	619.62 1,304.94 21,319.39 39,406.96	32.87 1,969.55 108.50 20,915.35	564.93 151.72 489.45	111.80 115.95		1,184.55 296.39 3,966.85 33,259.39 143.90 92,140.18	1,261.50 125.00 9,605.76 12,882.62 41,381.04
Minnesota Beltrami Island Farms Central Minnesota Farms Ethan Allen Minnesota Scattered Farms 1/ Tief River Falls Farms	22,418.52 52,199.92 57,791.28	11,538.41	550.18 41,234.68 530.45	15,229.52	1,907.88	22,976.70 122,106.44 530.45	124,040.88
Mississippi Mississippi Farm Tenant Security Mississippi Rehabilitation Farms Northeast Mississippi Farms	71,931.94 50,704.36	32,124.44 17,035.60	57,369.89 161.40 11,119.44	9,066.85 5,123.92	8,424.07	170,493.12 161.40 87,689.01	154,351.44 26,196.68
Missouri Osage Farms Rehabilitation Demonstration Farms	47,332.84 21,459.79	25,247.78 7,665.36	21,861.90 2,257.90	12,452.59 2,698.18	3,567.70 4,070.94	110,462.81 36,152.17	48,182.76 33,299.40
Montana Fairfield Ranch Farms Hill River Farms	62,429.28 102,715.52	46,820.50 71,651.66	90,272.80 130,247.27	15,684.22 144,941.97	6,244.74 3,697.71	221,421.54 323,254.13	91,448.19 115,399.62
Nebraska Republican Valley Farmsteads			72.83			72.83	516.66
New Mexico El Pueblo Grazing Project New Mexico Farms New Mexico Scattered Farms Silver City Farms 1/	25,295.06 8.28	1,757.46 11,783.15 469.60	15,724.37 441.02	6.88 603.22 16.65	4,064.17	1,764.34 57,470.27 935.55	169.92 11,789.64 233.00
New York Finger Lakes Farms New York Valley Farms	30,810.91 25,306.36	8,544.01 2,627.04	26,836.62 21,405.87	7,124.71 4,830.67		73,346.25 54,169.96	26,621.02 20,403.53
North Carolina North Carolina Farm Tenant Security North Carolina Scattered Farms Wolf Pit Farms	29,352.71 19,119.15 14,749.65	2,817.40 4,482.84 8,078.45	16,365.40 101.94 5,012.44	8,843.45 1,792.71 2,122.76	64,054.53	57,378.96 89,611.63 29,963.30	63,685.79 10,339.63 11,539.56

Project	Maintenance and	Taxes	Insurance	Other Operating Cost	Total Operating Cost	Income to 6/30/42
Project	Maintenance and	Taxes	Insurance	Other Operating Cost	Total Operating Cost	Income to 6/30/42
North Dakota						
North Dakota Scattered Farms	\$ 50,699.97	\$ 164.83	\$ 322.11	\$ 8,208.25	\$ 186,944	\$ 607.90
Red River Valley Farms		42,743.67	12,772.64		138,070.19	149,905.78
Ohio						
Scioto Farms	63,503.82	23,209.64	15,640.60	10,294.24	154,328.42	105,523.23
Oklahoma						
Eastern Oklahoma Farms	56,311.34	13,455.98	3,882.64	3,682.19	85,507.75	58,656.10
101 Ranch Farms	52,263.03	9,820.14	4,360.74		86,786.81	34,893.88
Oklahoma Farm Tenant Security	25,749.84	9,244.51	3,373.68		51,713.79	67,209.48
Oregon						
Yamhill Farms	63,208.30	53,952.00	13,492.87	2,657.64	172,008.64	56,518.23
Pennsylvania						
Northampton Farms	3,950.99	2,646.01	2,579.83	15,718.17	26,644.25	18,154.66
Pennsylvania Farms	37,010.62	13,283.92	3,584.26		65,067.23	13,036.86
South Carolina						
Allendale Farms	41,191.71	6,593.74	4,303.82		59,894.56	36,174.22
South Carolina Farm Tenant Security	24,799.69	7,771.97	3,269.08		42,590.46	31,156.34
South Carolina Scattered Farms	321.29	1,124.63	1,302.31		5,457.38	5,457.16
South Dakota						
Eastern South Dakota Farms	25,860.35	17,432.25	3,964.37	3,082.17	58,339.37	39,244.24
Spearfish	44.50		128.67	135.00	278.17	2,434.85
Tennessee						
Goodlettsville Farms	204.43				287.18	
Tennessee Farm Tenant Security	52,091.68	20,459.72	11,645.93	7,229.67	100,947.21	61,791.46
Texas						
Fannin Farms	36,244.75	6,217.64	991.68	250.71	50,117.92	22,317.21
Mexia Colony		1,082.85			1,082.85	6,179.57
Texas Farm Tenant Security	78,221.73	14,777.73	8,596.49		120,017.06	97,420.67
Utah						
Sevier Valley Farms	4,643.80	2,869.90	699.48		8,423.18	3,857.85
Widtsee Resettlement Project		990.83	498.69		1,489.52	3,871.58
Virginia						
Colonial Acres		7.18	20.50		27.68	
Washington						
Shonomish Farms	48,841.17	18,723.69	7,359.17	1,938.75	83,725.98	25,647.70
Washington Scattered Farms	810.78	12,935.64	5,597.63		21,087.55	3,093.84
Wisconsin						
Central Wisconsin Farms	62,399.71	36,091.39	13,820.71	4,025.10	144,108.55	82,604.99
Lakewood-Grandon Farms	11,415.87				11,415.87	
Langlade and Oneida Project		1,817.75			1,817.75	310.00
Wisconsin Scattered Farms		849.40			849.40	
Vulcan Corporation						1,615.61
Total Scattered Farms Projects	\$ 2,213,121.09	\$ 1,145,681.49	\$ 355,313.19	\$ 232,435.61	\$ 4,826,667.58	\$ 2,538,742.33

(g) WATER FACILITIES, ARID AND SEMIARID AREAS

This appropriation has been transferred to and merged with "Loans, Grants, and Rural Rehabilitation", as explained above.

(h) WATER CONSERVATION AND UTILIZATION PROJECTS

The Budget schedule reflects obligations for 1942 and estimated obligations for 1943 and 1944 under the funds transferred to the Department of Agriculture from the appropriation "Water conservation and utility projects, Act Aug. 11, 1939, as amended (Reimbursable)," (Dept. of the Interior) under authority of the following deficiency appropriation acts:

Additional Urgent Deficiency Appropriation Act, 1941.....	\$ 580,000
Second Supplemental National Defense Appropriation Act, 1942 ..	<u>1,500,000</u>
Total Transferred, 1941 and 1942	<u>2,080,000</u>

These transferred funds were provided to enable the Secretary of Agriculture to carry out his responsibilities under the Wheeler-Case Act, approved October 14, 1940, which was passed "for the purpose of stabilizing water supply and thereby rehabilitating farmers on the land and providing opportunities for permanent settlement of farm families."

The Budget includes no estimate for additional funds for fiscal year 1944, but reflects estimated obligations in that year of \$450,000 from the unobligated balance of the 1942 transfer.

PROJECT STATEMENT

Project	1942	1943 (estimated)	1944 (estimated)	Increase or decrease
1. Surveys and investigations ...	\$26,561:	\$169,636:	\$140,500:	-\$29,136 (1)
2. Land purchase, improvement, and development	243,641:	862,077:	129,800:	-732,277 (2)
3. Planning, management, and administration	52,916:	55,500:	48,500:	-7,000 (3)
4. Operation, maintenance, and repairs during construction ...	22,288:	97,500:	85,000:	-12,500 (4)
5. Payments in lieu of taxes during construction	- -:	21,900:	22,800:	+900 (5)
6. Insurance on improvements dur- ing construction	1,333:	10,600:	10,900:	+300 (6)
Total	346,739:	1,217,213:	437,500:	-779,713
Transfers in the estimates to other appropriations (see Budget schedule for details) ...	+37,500:	+28,548:	+12,500:	- -
Net available	384,239:	1,245,761:	450,000:	- -
1941 unobligated balance avail- able in 1942	-580,000:	- -:	- -:	- -
1942 unobligated balance available in 1943	+1,695,761:	-1,695,761:	- -:	- -
1943 unobligated balance available in 1944	- -:	+450,000:	-450,000:	- -
Received by transfer from "Water conservation and utility proj- ects, Department of Interior" ..	-1,500,000:	- -:	- -:	- -
Total estimate or appropria- tion	- -:	- -:	- -:	- -

INCREASES AND DECREASES

The decrease of \$779,713 consists of the following items:

(1) A decrease of \$29,136 for "Surveys and investigations." It is planned to focus the work of surveying and investigating on only those projects permitting maximum contribution to the increased food production effort in a minimum of time and with a minimum competitive demand for critical equipment and materials.

(2) A decrease of \$732,277 for "Land purchase, improvement and development". The greater part of the land to be acquired for the projects approved by the President under the Act of October 14, 1940 will be completed during 1943. Major improvements are being deferred for the duration of the war, and only necessary clearing, leveling and ditching of the land are being continued.

- (3) A decrease of \$7,000 for "Planning, management, and administration". The preliminary planning of the projects being continued will be completed during 1943 and the early part of the fiscal year 1944.
- (4) A decrease of \$12,500 for "Operation, maintenance, and repairs during construction". As these projects are completed and settled, and the farmers established and able to carry the burden of the costs, it will be possible to reduce the cost of this work.
- (5) An increase of \$900 for "Payments in lieu of taxes during construction" on additional lands acquired.
- (6) An increase of \$300 for "Insurance on improvements during construction" to cover the additional cost of protection on property acquired.

WORK UNDER THIS APPROPRIATION

Objective: To provide for the making of investigations and surveys concurrently or in cooperation with the Bureau of Reclamation, Department of the Interior, and to obtain essential information relative to suggested and potential projects regarding their agricultural and economic feasibility; to provide for the clearing, leveling, ditching, etc. of farm lands for the projects approved by the President under the Act of October 14, 1940, and technical and administrative services for the planning, management, operation, and maintenance of such projects.

The Problem and its Significance: Fundamentally, the basis of this program is the development, conservation, and utilization of land and water in a manner that provides for the greatest possible number of family-sized self-sustaining farms. The plight of families stranded on dry lands or crowded in irrigated areas having a deficient water supply grows more severe each year. It is vital that the construction of projects in areas of most acute need, and where there is strong justification, should continue during the national emergency period. The management of the land and water resources entails not only stabilization of agricultural development and income, but emphasis on increased food production to meet the war needs. Investigations and proposals for new developments are being focused on projects permitting maximum contribution to the increased food production effort in the minimum of time and with a maximum competitive demand for critical equipment and materials.

Over 300 recommendations have been received both by the Bureau of Reclamation and by this Department for the development of projects under this program. Investigational reports have been written for projects located in all but one of 17 western states. This includes 60 investigational reports, covering almost three-fourths of a million acres of irrigable land. There are 141 projects in various stages of investigation to determine the Department of Agriculture's participation from an agricultural and economic standpoint, as required by section 3(a), section 5 and section 6 of the Act of October 14, 1940.

General Plan: As recommendations are received from the Bureau of Reclamation, advance and general investigations and surveys, as compared with specific planning for approved projects, are conducted from an agricultural economic standpoint to determine the Department of Agriculture's participation and to provide estimates for the cost of land development.

As plans for projects are approved and appraisal and acquisition of land has commenced, and work started toward clearing of trees and brush and removal of weeds and stones, a study is made of agricultural and resource planning before and after irrigation; unit subdivision; use of dry land and grazing land in connection with irrigation units; family selection; and preparation of farm plans.

After the irrigation construction phase has been completed and until the projects have been entirely completed and settled, the responsibility for operation, maintenance, and repair of the property is assumed by the Farm Security Administration. Also, during this period, the Farm Security Administration assumes responsibility for acquisition of agreements between the Government and local political subdivisions and the making of payments in lieu of taxes on lands which have been purchased by the Government for this program. It is also necessary during this period for the government to provide adequate protection through fire and property damage insurance of property acquired or constructed on these projects.

(i) WATER CONSERVATION AND UTILITY PROJECTS
(ALLOTMENT TO FARM SECURITY ADMINISTRATION)

The Budget schedule covers the 1942 and 1943 obligations from the transfer made in 1941 from the Interior Department for acquisition of land for water conservation and utility projects. No obligations are contemplated for 1944.

TRUST ACCOUNT
(j) PAYMENTS IN LIEU OF TAXES AND FOR OPERATION
AND MAINTENANCE OF RESETTLEMENT PROJECTS

The Budget schedule covers funds provided for by Section 3 of the Act of Congress approved June 29, 1936 (40 U.S.C. 431-434), under which receipts derived from the operation of any resettlement project or any rural rehabilitation project for resettlement purposes are covered into the United States Treasury and constitute a special fund, which is available for payments in lieu of taxes to states, political subdivisions, and local taxing units and for any other expenditures for operation and maintenance (including insurance) of such projects. The receipts made available are used, as provided for under the Act, to make payments in lieu of taxes, to defray the costs of insurance, and for operation, maintenance and special miscellaneous expenses on resettlement projects and rural rehabilitation projects for resettlement purposes. The inter-relationship of this appropriation with other project items is outlined in these notes under the heading "Liquidation and Management of Resettlement Projects."

The deposits to this fund will be greatly decreased due to the transfer of 42 projects to the Federal Public Housing Authority on September 30, 1942, as mentioned under the item "Liquidation and Management of Resettlement Projects." The obligations will not be decreased to the same extent as collections, and during the next few years it is estimated that the decrease of obligations will not keep pace with the decrease in revenue due to the sale of project units as explained under the item "Liquidation and Management of Resettlement Projects."

Receipts and obligations hereunder for 1939, 1940, 1941, and 1942, and estimated for 1943 and 1944 are as follows:

	<u>Receipts</u>	<u>Obligations</u>	<u>Balance</u>
1938	\$	\$	\$ 719,097
1939	1,497,896	1,363,136	853,857
1940	2,589,272	1,955,943	1,487,186
1941	2,232,558	2,224,942	1,494,802
1942	2,520,266	2,337,689	1,677,379
1943 (Est.)	1,175,000	1,717,871	1,131,508
1944 (Est.)	890,000	1,205,670	818,838

TRUST ACCOUNT

(k) STATE RURAL REHABILITATION CORPORATION FUNDS

Under the rural rehabilitation program of the Federal Emergency Relief Administration, providing grants to the states, there was established in a majority of the states (during 1934 and 1935) a State Rural Rehabilitation Corporation to administer the rural rehabilitation program in each state. These corporations, acting through their respective directorates, have entered into individual agreements with the United States Government, whereby their assets and liabilities have been transferred in trust to the Government to be made available for rural rehabilitation purposes within the respective states.

The assets transferred and all assets subsequently collected on behalf of the corporations have been deposited in special trust fund accounts in the Treasury of the United States and have been administered by the Farm Security Administration on behalf of the Secretary of Agriculture, in accordance with the terms of the transfer agreements. Since the dates of transfer of the assets of each state corporation, the Farm Security Administration has endeavored to convert excess assets of the corporations into cash and to collect as much as reasonably possible on outstanding loans and other accounts receivable. Funds thus made available for rural rehabilitation purposes have been used for the payment of outstanding obligations and new obligations incurred for the development of corporation property and for the making of rehabilitation loans and grants to corporation borrowers. The same disposition will be made of funds received during the fiscal year 1944.

During the fiscal year 1942 loans and grants totaling \$6,299,153 were made to corporation clients, approximately \$4,000,000 will be used for this purpose in 1943, and approximately \$3,005,000 for grants and \$4,740,638 for loans will be made in 1944 which accounts for the sharp increases in obligations for those years as reflected in the following table. However, collections increased in 1942 and we estimate will remain approximately at the same high level during 1943 and 1944.

	<u>Receipts</u>	<u>Obligations</u>	<u>Balance</u>
1938	\$10,231,994	\$	\$10,231,994
1939	3,725,306	4,417,869	9,539,431
1940	4,367,383	2,799,540	11,107,274
1941	2,949,461	2,716,741	11,339,994
1942	3,616,022	8,147,958	6,808,058
1943 (Est.)	3,500,000	5,436,365	4,871,693
1944 (Est.)	3,600,000	8,471,693	- -

(1) DRAINAGE DISTRICT ASSESSMENTS ON ACQUIRED LANDS
FARM SECURITY ADMINISTRATION

The Budget schedule covers the obligations from the Trust Account established for the deposit of funds received from vendors of land acquired by the Farm Security Administration, to be held in trust for the payment of drainage taxes assessed against said land, the remainder, if any, to be refunded to the vendor after the last payment has been made.

	<u>Receipts</u>	<u>Obligations</u>	<u>Balance</u>
1940	\$22,580	\$3,730	\$18,850
1941	1,839	- -	20,689
1942	30,350	18,974	32,065
1943 (Est.)	- -	24,345	7,720
1944 (Est.)	- -	1,710	6,010

TRUST ACCOUNT

(m) LIQUIDATION OF DEPOSITS RESERVE FOR MAINTENANCE AND
REPAIR, LEASE AND PURCHASE AGREEMENTS

The Budget schedule accounts for the deposit of funds received from purchasers of property as deposits to a reserve fund for maintenance and repair of the property, to be held in trust for the purchaser in accordance with the provision of the Lease and Purchase agreement. Receipts and obligations hereunder for 1941 and 1942 and estimated for 1943 and 1944 are as follows:

	<u>Receipts</u>	<u>Obligations</u>	<u>Balance</u>
1941	\$9,023	\$- -	\$9,023
1942	5,247	112	14,158
1943	10,250	6,000	18,408
1944	15,500	7,500	26,408

TRUST ACCOUNT

(n) LIQUIDATION OF DEPOSITS, LEASE AND PURCHASE CONTRACTS

The Budget schedule accounts for the deposit to a reserve fund of collections received from purchasers of property as deposits toward the purchase price of the property in accordance with the terms of the Lease and Purchase Agreements. Actual receipts and obligations for 1942 and estimated for 1943 and 1944 are as follows:

	<u>Receipts</u>	<u>Obligations</u>	<u>Balance</u>
1942	\$3,000	\$2,989	\$11
1943	100,000	42,000	58,011
1944	125,000	50,000	133,011

PASSENGER-CARRYING VEHICLES

Under normal conditions the Farm Security Administration has made a practice of trading in passenger-carrying vehicles when they have been operated a total of 60,000 miles or more. The resultant elimination of high repair costs for worn equipment and the increased prices received for the trade-ins have proved this plan to be practical and economical. If this policy were being followed at the present time, approximately 50 percent of the presently owned equipment would be subject to replacement. Many of these vehicles have already been operated 60,000 miles and are up to five years old. Consistent with the war program, we have not proposed replacements during the fiscal year 1944, except for those vehicles which will have been operated 75,000 miles or more by July 1, 1943. It is expected that these vehicles will approach 90,000 miles of usage before new purchases are actually effected.

Long trips from point to point have been entirely restricted. Repair costs will, of course, be increased as the equipment gets older, but by operating the vehicles at lower speeds, by establishing a system of preventative maintenance for servicing and repairing equipment, it is hoped to extend the use of these vehicles at least 50 percent beyond their normal life-expectancy.

The purchase price of new vehicles has been based on the \$925 per unit maximum allowance established by Congress. Trade-in values appear to be quite low but it should be remembered that these vehicles will have been

used considerably beyond the recognized life expectancy. If new vehicles are not available during the fiscal year 1944, the funds requested for new purchases would be needed for additional repairs to keep the proposed trade-ins in use and for transportation by other methods. No increase to the total number of vehicles currently owned is recommended.

The one hundred thirty-seven (137) old vehicles to be operated and the forty-two (42) new vehicles proposed to be purchased, (all of which are replacements) will be used for the following purposes:

1. The passenger-carrying vehicles assigned for operation from our Washington and regional offices are driven to points in rural areas not served by common carrier. These vehicles are not assigned for operation by any particular individual or group of individuals but are operated on the basis of a pool with transportation being furnished from the pool to those individuals traveling to such rural points. By exercising a control over the itineraries of travelers, a number of officials can be transported in one car. This combined travel could not always be proposed if personally owned vehicles were used.

2. The passenger-carrying vehicles being operated on projects are furnished to officials of the projects in most instances as individual assignments, and it has been conclusively shown that considerable savings are effected by furnishing Government owned vehicles to these individuals for project travel rather than to furnish transportation by reimbursing the employees for the use of their personally-owned vehicles. This is due, primarily, to the ability, in most instances, to purchase gasoline and oil in tank wagon or drum deliveries at a considerable saving over posted service station prices. Further, storage costs are held at a minimum by the utilization of project storage facilities. Maintenance costs are held at a minimum through the employment of equipment maintenance staffs at the larger projects to service all motorized and mechanized equipment or through the negotiation of favorable local servicing contracts through commercial sources. Taking all these factors into consideration, transportation can be furnished by Government-owned vehicles at our projects at a considerably lower rate per mile than would be possible by reimbursement at either a predetermined compensable or actual expense rate for the operation of privately owned vehicles.

3. The vehicles to be operated under the Water Conservation and Utilization program will be used for the transportation of area personnel in connection with the planning, investigating, and developing of Water Conservation and Utilization projects; and by project personnel, such as project managers and project supervisors, within the project area in the administration of their official duties.

